

A key to the Afrotropical genera of Eucoilidae (Hymenoptera), with a revision of certain genera

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Synopsis

A key to the 19 genera of Afrotropical Eucoilidae is provided, together with keys to the species of ten genera. Two genera (*Ealata*, *Nordlanderia*) and 98 species are newly described; the primary types of eight nominal species have been examined, of which two are newly synonymized. A checklist of the ten genera and 111 species dealt with is included.

Introduction

The virtually cosmopolitan family Eucoilidae is one of the largest and most distinctive groups of Cynipoidea. These small, mostly blackish insects are easily recognizable by the presence of a highly modified scutellum (Fig. 2). They occur wherever their dipteran hosts are found. As far as is known (and the biology of many species has never been investigated) eucoilids are protelean endoparasites of the larvae and puparia of cyclorrhaphous Diptera. A number of species attack various phytophagous Diptera in the families Agromyzidae, Anthomyiidae, Chloropidae, Drosophilidae and Tephritidae (Thompson, 1955), families that include a variety of serious agricultural pests. Consequently several eucoilids are of considerable economic importance as potential biological control agents. A number of species in the genera *Hexacola*, *Trybliographa*, *Rhoptromeris*, *Kleidotoma* and *Ganaspidium* are of interest since they parasitize species of

Liriomyza, *Oscinella* and *Hylemyia* which attack cereal and related crops. *Trybliographa daci* Weld is parasitic on the oriental fruit-fly (*Dacus dorsalis* Hendel) which is a well-known pest of a variety of fruit and vegetable crops. Probably the most extensively studied eucoilid is *Trybliographa rapae*, a common parasite of *Hylemyia* species which attack brassicas (Wishart & Monteith, 1954). In Europe *Rhoptromeris heptoma* (Hartig) is an important parasite of the frit fly (*Oscinella frit* (L.)) (Nordlander, 1978b).

A variety of other species of Eucoilidae attack dipterous larvae inhabiting dung and carcasses, including species of the families Calliphoridae, Muscidae, Sepsidae and Sphaeroceridae (Thompson, 1955). For example, the European eucoilid *Kleidotoma marshalli* Cameron is known to parasitize larvae of a variety of *Calliphora*, *Lucilia* and *Musca* species, whilst *Eutrias tritoma* (Thomson) has been reared in the U.S.A. from sepsid puparia in cow dung (Weld, 1952).

Various authors have published papers on the Afrotropical Eucoilidae: Benoit (1956), Bridwell (1919), Cameron (1904), Hedicke (1928a, 1928b), Kieffer (1919, 1913), Masner (1960) and Risbec (1950, 1956). Some have described new genera and species, others only species. Apart from Kieffer (1910) and Weld (1952), who give keys to genera on a world basis, no one has attempted to key genera and species of the Afrotropical Eucoilidae. During the preparation of this paper all available type-material has been examined and redescribed. When type-material of a taxon was not available its presumed taxonomic position is discussed in the text. A key to the genera of Afrotropical Eucoilidae is given and ten of these genera are revised with keys to species; two genera and 98 species are described as new. One genus, *Stentorceps*, is included in a generic key for the first time. A further nine genera remain to be revised.

Material examined and terminology

I have been fortunate to have on loan large amounts of material from Dr J. Decelle, Musée Royal de l'Afrique Centrale, Tervuren. This material, together with R. E. Turner's collection and other more recently obtained specimens (principally from Malaise traps) in the British Museum (Natural History), has formed the basis for this revision. Very large areas of the Afrotropical region remain from which material has not been available for examination. In very few instances are host data given and then only from the labels attached to the specimens. The terminology follows Richards (1977) but some older names are used, particularly in reference to wing venation. I have, where pertinent, related older terminology to the more recently introduced terminology of Nordlander (1982b). The term Afrotropical Region used in this paper was coined by Crosskey & White (1977) but was not employed in my earlier paper of 1979. Figures 1 and 2 have their respective parts labelled in abbreviated form, as follows:

anterior parallel lines – apl; hairy ring – hr; hypopygium – hy; lateral bar – lb; lateral lines – ll; lateral ridges – lr; mesoscutum – m; mesopleurae – mp; mesopleural suture – mps; malar ridge – mr; metapleurae – mt; notaulices – nt; nucha – nu; propodeum – pd; pronotal plate – pp; pronotum – pr; scutellum – sc; scutellar cup – scc; scutellar disc – scd; scutellar foveae – sf; tegulae – tg.

The following terms are used for the lines or furrows on the mesoscutum, anterior parallel lines, notaulices and lateral lines. Nordlander (1982) used the terms antero-admedian lines, notaulices and parapsidal furrows respectively.

Depositories

Type depositories are abbreviated in the text as follows.

BMNH	British Museum (Natural History), London.
GERDAT	Groupeement D'Etudes et de Recherches pour le developpment de L'Agronomie Tropicale, Montpellier.
MNHN	Muséum National d'Histoire Naturelle, Paris.
MRAC	Musée Royale de l'Afrique Centrale, Tervuren.
NCISA	National Collection of Insects, Division of Entomology, Pretoria.

USNM	United States National Museum of Natural History, Washington, D.C.
ZMC	Zoologisk Museum, Copenhagen.
ZSBS	Zoologische Sammlung des Bayerischen Staates, Munich.

Affinities of Eucilidae with other Cynipoidea

Amongst the Cynipoidea many of the higher taxa are definable in terms of biological as well as structural differences. Known biologies may be summarized thus:

FAMILY-GROUP TAXON	Host
Ibaliidae	Siricoidea (Chrystal, 1930; Spradberry, 1970)
Liopteridae	
Oberthuerellinae	Unknown
Liopterinae	Unknown
Mesocynipinae	? Cerambycidae (Diaz, 1973)
Eucilidae	Cyclorrhaphous Diptera
Figitidae	
Figitinae	Cyclorrhaphous Diptera (Askew, 1971)
Aspicerinae	Syrphidae (Weld, 1952)
Anacharitinae	Hemerobioidea (Selhime & Kanavel, 1968)
Himalocynipinae	Unknown
Cynipidae	
Cynipinae	Phytophagous gall-causers and gallinquilines (Eady & Quinlan, 1963)
Austrocynipinae	Reared from seeds of <i>Araucaria</i> (Araucariaceae) (Riek, 1971)
Charipidae	
Alloxystinae	Aphidiinae and Aphelinidae (as hyperparasites through Homoptera) (Quinlan & Evenhuis, 1980)
Charipinae	Psylloidea (Kierych, 1979)

The Eucilidae is distinguished from the five other families of Cynipoidea by the highly modified scutellum. This comprises an outer disc surmounted by a cup- or tear-drop-shaped elevation in the centre with a foveolate depression posteriorly. The family is apparently most closely related to the Figitidae which, except for the form of the scutellum, they resemble in structure. The two families have rather similar life-histories, in that most species are endoparasites of larvae and puparia of cyclorrhaphous Diptera, although the morphologically distinctive Anacharitinae parasitize hemeroboid lacewing larvae (Selhime & Kanavel, 1968; Lipkow, 1969). The Eucilidae and Figitidae, together with the Cynipidae and Charipidae, have segments 2 and/or 3 of the gaster enlarged, whilst the more posterior segments (4+) are the largest in other cynipoids (Quinlan, 1979). Tergite 1 is variable in shape from a long petiolate structure to an almost obscured crescent-shape, wider than long. The elongate petiolate form does not occur in the Cynipidae or Charipidae, but is found in the Eucilidae and Figitidae. Males of most families have much less specialized gasters. Whilst the Eucilidae are easily separated from other families by the form of the scutellum, some eucilid genera do show apomorphic features exhibited by genera in other families. For example, a strongly indicated ring of hairs is present at the base of tergite 2 in many eucilid genera (e.g., *Trybliographa*, *Rhoptromeris* and *Kleidotoma*), whilst a less conspicuous ring of hairs is found in certain genera of Cynipidae (e.g., *Aulacidea* and the related genera *Aylax* and *Isocolus*). A sparser ring of pubescence is also found in some Charipidae.

The plant-feeding habits of the Cynipidae are in contrast to the endoparasitic entomophagy of the Eucilidae and Figitidae. At first sight, therefore, the shared characteristics of the gaster of these taxa would appear to be the result of convergence, though it is possible that the Cynipidae adapted to their herbivorous mode of life from a figitid ancestor consuming the larvae of leaf- or stem-mining Diptera.

Taxonomic characters

Head

The female antenna is 13-segmented (occasionally 11, 12 or 14) and the overall shape is of importance, both at generic and specific level, but must be used in combination with other characters. Some species have filiform antenna, others are distinctly clavate. In those species with filiform antenna the term 'club' refers specifically to those apical segments of the antenna that bear rhinaria (Figs 229, 230), even though they may not appear swollen. In those species with clavate antenna the club is very clearly swollen as well as each segment having rhinaria (Figs 237, 256). The male antenna is 15-segmented, filiform and in some species the third or fourth segment is modified. This is of major importance at generic and specific level. The characters of the head have not been used to any great extent at the generic level although the sculpture of the occiput and the presence of striations around the malar area, the size and shape of the compound eye (the distance between them in relation to the height of an eye), the variation in the shape of the vertex viewed posteriorly, and the occipital carina are important, particularly at species level.

Thorax

The thorax (including the first abdominal segment of the propodeum, *vide* Richards, 1977) has many important characters. As mentioned above, the pronotal plate is extremely diverse in shape and form. The mesoscutum is invariably polished; notaulices, anterior parallel lines and lateral lines are either present, partially present or completely absent. Sometimes a line of hairs is present and replaces the notaulices. These structures are referred to under different names by Nordlander (1982*b*). The mesopleuron exhibits a wide variety of shapes and in the majority of genera the mesopleural carina or suture is present, either partly or completely. This structure has also been referred to as the mesopleural furrow (Eady & Quinlan, 1963). In some genera the subalar pit is very distinct whilst it is absent in others. The metapleuron varies in the number of transverse ridges present and in some species an anteroventral cavity is present, either with or without setae. The scutellum viewed dorsally comprises a central plate and an outer margin, 'cup' and 'disc' of earlier authors, termed scutellar plate and dorsal surface of the scutellum respectively by Nordlander (1982*b*). As indicated earlier, the cup varies in size and shape and in the number of foveae (if any) present around the outer margins. In most genera a single large fovea is present medially on the apical half of the cup. The scutellar disc is variable in both dorsal and, in some genera, lateral views, its surface is sometimes smooth and polished or in others a variety of sculpture is present. The shape of the scutellar disc at the apex is either rounded, conical or spine-shaped; in a few genera the apex is bicuspid. Many earlier authors have placed those species with a conical or spine-shaped scutellar disc in the same genera without regard to more fundamental characters. The propodeum in dorsal view invariably has carinae varying in shape and alignment to each other, with varying densities of sculpture medially, and pubescence on either side of the carinae. The nucha at the posterior end of the propodeum is obscure but generally ridged.

Gaster

The gaster comprises eight segments and has spiracles on segments 1 and 8 (Richards, 1977). The number of segments visible in lateral view varies from genus to genus. Segment 1 of the gaster is short, about as broad as long, normally smooth or crenulate, except for a few Neotropical genera in which it is long and narrow, in some cases longer than the combined lengths of the remaining segments. The second segment is always the largest, generally as large as the remaining visible segments combined. In some genera the base of the second tergite has a ring of pubescence obscuring the first tergite, either in lateral view or completely on the dorsal surface as well. The overall shape of the gaster is variable within genera and it is laterally compressed to a lesser or greater extent. The hypopygium of the female is moderately to

strongly projecting. The legs vary little within the Eucoilidae except that the size ratio of coxae, femora, tibiae and tarsi varies from species to species. In some genera the presence of hair patches on the mid-coxae has proved to be of value at species level (Nordlander, 1982a).

Wings

The venation of the forewing of Cynipoidea has been used extensively at family, generic and specific level. Earlier authors gave much emphasis, particularly with eucoilids, to the radial cell, placing great reliance on whether it was closed or open on the wing margin. In many instances it is hard to decide one way or the other, the venation being vestigial (Day, 1984), having linear convexity in dorsal view, being concave ventrally, thus showing no clear or distinct longitudinal boundary when viewed with transmitted light, being only pigmented and not sclerotised.

Size

The overall size of Eucoilidae varies from genus to genus, ranging from 1.5–5.0 mm.

The generic classification of Eucoilidae and discussion of relationships

Earlier authors (Dalla Torre & Kieffer, 1910; Weld, 1952) tried to delimit genera on superficial characters, such as the radial cell being either open or closed, the presence or absence of a ring of hairs at the base of tergite two of the gaster, the scutellum either with or without a spine on the apical margin or the apex rounded, truncate, conical or emarginate. This resulted in an assemblage of genera containing species not necessarily related to each other.

Nordlander (1982b) in his phylogenetic classification of the Eucoilidae, recognised 28 valid genera which he divided into the following monophyletic groups.

1. *Gronotoma*-group comprising *Zaeucoila*, *Gronotoma*, *Diglyphosema*, *Disorygma*, *Microstilba*.
2. *Trybliographa*-group comprising *Trybliographa*, *Eucoila*, *Bothrochacis*.
3. *Rhoptromeris*-group comprising *Leptopilina*, *Cothonaspis*, *Rhoptromeris*, *Trichoplata*.
4. *Chrestosema*-group comprising *Chrestosema*, *Glauraspida*, *Pseudopsichacra*, *Odon-teucoila*, *Dieucoila*, *Leptolamina*.
5. *Ganaspis*-group comprising *Ganaspis*, *Tetramerocera*, *Paramiomoea*, *Pentamerocera*, *Coneucoela*, *Didyctium*, *Hexacola*, *Hypodiranchis*.
6. *Kleidotoma*-group comprising *Eutrias*, *Kleidotoma*.

At present I recognise 19 of these genera as occurring in the Afrotropical region. It is impossible to elucidate Nordlander's generic parameters from his five papers sufficiently well to recognise generic relationships precisely. Quinlan (1978) established the significance of the pronotal plate at species level. In the present work further emphasis is placed on this feature at generic level, particularly as to whether or not the pronotal plate projects forward when viewed dorsally and laterally, and to the presence of either enclosed or open lateral foveae either side of the medial area of the plate. The present key to genera attempts to indicate the phylogenetic relationships. The genera *Nordlanderia*, *Disorygma*, *Diglyphosema*, *Ealata* and *Eucoilidea* all have a plesiomorphic form of pronotal plate, i.e. it does not project forward, being similar in many respects to that found in the Figitinae and the cynipine genera *Aulacidea* and *Aylax*. Coupled with this form of pronotal plate, the base of tergite two of the gaster never has a ring of dense pubescence, at the most only a few sparse hairs on the lateral margins. The remaining genera, the majority, form a monophyletic group characterized by the apomorphic form of pronotal plate. In these genera the plate projects forward and is visible in dorsal and lateral view. Within this group, the genera *Trichoplata*, *Rhoptromeris* and *Stentorceps* have the plate further modified, in that there is lateral fusion of the anterior and posterior parts so that the fovea either side of the pronotal plate are closed on the lateral margins (Figs 246, 351). Nordlander (1982a) was the first to draw attention to this shared character of *Trichoplata* and *Rhoptromeris*. In some species of this group the medial bridge between the foveae is obscure or in the form of a

transverse groove (Fig. 250). *Stentoriceps* differs remarkably from *Trichoplasta* and *Rhoptromeris* in having extraordinary protuberances on the head, a trumpet-shaped protrusion on the supraclypeal area of the face (Figs 31, 32) and elongate mandibles (Fig. 290). *Trichoplasta* is primarily separated from *Rhoptromeris* and *Stentoriceps* by the elongated, almost spine-shaped apex of the scutellum. *Rhoptromeris* is further distinguished from *Trichoplasta* by the forewing venation. All other genera with a projecting pronotal plate have the foveae either side of the medial area of the pronotal plate open and form separate groups of genera. Nordlander (1982a) published a cladistic analysis of *Trybliographa*, *Leptopilina*, *Cothonaspis*, *Rhoptromeris* and *Trichoplasta* using a matrix of 16 characters; the characters were divided into plesiomorphic (primitive) and apomorphic (derived) states and the character polarity determined through outgroup comparisons using the operational rule of Watrous & Wheeler (1981). Nordlander concluded that *Leptopilina*, *Cothonaspis*, *Rhoptromeris* and *Trichoplasta* had seven synapomorphies in common and constitute a monophyletic group. I believe that the form of the pronotal plate clearly separates *Rhoptromeris* and *Trichoplasta* from *Leptopilina* and *Cothonaspis*. Masner (1958), in discussing the genus *Ganaspis*, relates it to *Leptopilina*, *Rhoptromeris*, *Pseudeucoila* (now a synonym of *Trybliographa*) and *Odonteucoila*. Masner (1960) included in his key to *Odonteucoila* three species now recognised as *Trichoplasta* from the Afrotropical Region, the significance of the pronotal plate not being noted. I have included both *Odonteucoila* and *Coneucoila* in the generic key although both genera appear to be restricted to the Neotropical Region; species originally described in both genera from the Afrotropical Region have recently been transferred to *Trichoplasta* (Nordlander, 1982a). Weld (1952), as did Masner, characterised *Ganaspis* by the flat, mirror-like, elliptical scutellar cup. Quinlan (1978) erroneously based his interpretation of the genus on one of the species included in Masner's key, the holotype of the type-species, *Ganaspis mundata* Foerster not being available. Nordlander (1980), however, placed *G. subnuda* with *Leptopilina heterotoma* (Thomson) as a junior synonym. A female of the type-species was redescribed by Weld (1952). *Ganaspis* is a complex genus and needs more research at species level before deciding its relationship to other genera. At present it is defined by the mirror-like, almost flat scutellar cup and the weakly conical apex of the scutellum. *Leptopilina* shares a number of characters with *Cothonaspis*, *Rhoptromeris* and *Trichoplasta*, and this is illustrated in Nordlander's cladogram referred to above. Prior to Nordlander (1980), *Leptopilina* had hardly been referred to in the literature. Weld (1952) had doubts about the placement of *Leptopilina*, the holotype of the type-species being a male, and suggested that it could be a *Ganaspis* species. However, *Leptopilina*, although dissimilar, appears to be closest to *Cothonaspis* in the shape of the thorax and in the petiole (first segment of the gaster) which is widened posteriorly although it has a denser ring of hairs (sometimes thin) at the base of tergite two. *Cothonaspis* (one of the earliest described genera in the Eucoilidae) has many characters in common with *Rhoptromeris* and *Trichoplasta*. It differs (apart from the pronotal plate character referred to above) primarily by the form of the first segment of the gaster, which is virtually hairless and carinate, and the base of tergite two which has only very sparse pubescence on the lower lateral margins. *Hexacola* and *Kleidotoma* have a number of characters in common, such as, for example, the shape and sculpture of the scutellum. In both genera the cup is small and the scutellar disc is either longitudinally striate or reticulate-striate, but exceptionally it can be almost smooth. They differ mainly in the wing characters. In *Kleidotoma* the apex of the wing is either incised or arcuate, and the radial cell of the forewing is open on the margin and distinctively shaped (Fig. 8). In *Hexacola* the apex of the wing is rounded and the radial cell is decidedly closed on the margin (Fig. 164). Nordlander (1982b) regards *Hexacola* as being in the *Ganaspis* group of genera (p. 247). *Afrodontaspis* has a number of unique characters that do not indicate a clear relationship with any other group of genera, i.e., the scutellar cup is declined posteriorly so that it is not completely visible in dorsal view (Fig. 50). The sides of the pronotum, mesoscutum, lateral bars of the scutellum and scutellar disc are striate (Fig. 50). The scutellum is sharply pointed apically and the wing surfaces are dotted with hair bases similar to those found in *Bothrochacis* and *Eucoila*. In Weld's key (1952) it would run close to *Trissodontaspis*, a Neotropical genus. It is distinguished from it, however, by the radial cell of the forewing being open and by the structure of the scutellum. *Eucoila* and *Bothrochacis*

both have almost bare wing surfaces (only a few hairs are present) and are separated from each other by the striking apomorphic cup of *Bothrochacis* in which the scutellar cup itself is sharply declined apically. The surface of the cup is elevated in front of the posterior fovea so that, when viewed dorsally, it appears declined apically. *Trybliographa* has world-wide distribution and is extremely rich in numbers of species; they are slightly larger in size than those of other genera except *Bothrochacis* and *Eucoila*. Nordlander (1981) synonymized eight Foerster genera, previously regarded as distinct, with *Trybliographa*. No keys are given to genera but from his remarks on the generic relationships, *Bothrochacis* and *Eucoila* are related by a series of characters regarded as symplesiomorphic. In common with *Eucoila* and *Bothrochacis*, the scutellar plate is large, almost circular in some species and well elevated, depressed in the centre with a large apical fovea. The scutellar disc varies in degree and intensity of sculpture, from punctate-reticulate-rugose. In a large number of species the lateral bars of the scutellum are striate in part. The ring of pubescence at the base of tergite two of the gaster is dense and complete on the dorsal surface. The radial cell of the forewing can be open or closed. Nordlander (1982a) places *Glauraspidia* in the *Chrestosema*-group. *Glauraspidia* itself is characterized and distinguished from related genera by the absence of a mesopleural suture, although in some species it may be weakly indicated. The dense pubescence either side of the pronotal plate and on the entire metapleuron, and the density of the pubescence on the propodeum together with a dense felt-like ring of pubescence at the base of tergite two of the gaster further distinguish this genus. Benoit (1956) described a monotypic genus *Daruna*, relating it to *Rhoptromeris* but distinguishing it by the rather unusual form of the scutellar cup which has two large foveae, one centrally and almost round, the other on the apex and transverse. The surface of the scutellar disc is smooth and shining, the apex rounded. The pronotal plate projects forward and the foveae are open on the lateral margins. The systematic position of *Daruna* is unclear, but the form of the pronotal plate suggests that it is not closely related to *Rhoptromeris*.

Checklist of the Afrotropical Eucolidae included in this paper

EUCOILIDAE Thomson, 1862

AFRODONTASPIS Weld, 1961

lanatus sp. n.

striatissima Benoit, 1956

COTHONASPIS Hartig, 1840

dulcis sp. n.

ealis sp. n.

pentatoma Hartig, 1840

EALATA gen. n.

clava sp. n.

marica sp. n.

saba sp. n.

EUCOILIDEA Ashmead, 1887

Afrostitilba Benoit, 1956 syn. n.

advena sp. n.

bucca sp. n.

compressa sp. n.

conversa sp. n.

dubia sp. n.

extraria sp. n.

fetura sp. n.

furcula sp. n.

lacerta sp. n.

lana sp. n.

leptis sp. n.

marcellus sp. n.

mauri sp. n.

nitida (Benoit, 1956) comb. n.

pallida sp. n.

perangusta sp. n.

trulla sp. n.

tyrus sp. n.

urundiensis Benoit, 1956

HEXACOLA Foerster, 1869

absensa sp. n.

amantia sp. n.

atropos sp. n.

bifaria sp. n.

compacta sp. n.

fringa sp. n.

hexatoma (Hartig, 1841)

octoclava sp. n.

pallida sp. n.

quinqueclavata sp. n.

quisnama sp. n.

septemius sp. n.

zama sp. n.

KLEIDOTOMA Westwood, 1833

arbitra sp. n.

bifurcata sp. n.

conica sp. n.

distenda sp. n.

eala sp. n.

elongula sp. n.

erebus sp. n.
favus sp. n.
fimbriata sp. n.
montana Kieffer, 1910
morsum sp. n.
nigrans sp. n.
nitidiuscula sp. n.
norma sp. n.
strigosa sp. n.
ventosus sp. n.

NORDLANDERIA gen. n.

acis sp. n.
pallida sp. n.
plowa sp. n.

RHOPTROMERIS Foerster, 1869

abba sp. n.
afer sp. n.
agis sp. n.
attis sp. n.
bicolor sp. n.
bupalus sp. n.p
cepheus sp. n.
connatus sp. n.
crito sp. n.
cubitalis sp. n.
diversa sp. n.
enna sp. n.
equalis sp. n.
hebe sp. n.
heptoma (Hartig, 1840)
navius sp. n.
naxos sp. n.
oeta sp. n.
pagasa sp. n.
pallidus sp. n.

persius sp. n.
punctata sp. n.
rufulus sp. n.
rutshuris sp. n.
rwanki sp. n.
sinis sp. n.
temesa sp. n.
thales sp. n.
velia sp. n.
zetes sp. n.
zeus sp. n.

STENTORCEPS Quinlan, 1984

tubicen Quinlan, 1984

TRICHOPLASTA Benoit, 1956

bicolor sp. n.
brevispina (Masner, 1960)
conica sp. n.
contrasta sp. n.
equalis sp. n.
extensus sp. n.
filiformis sp. n.
gracilicornis (Kieffer, 1910)
longispina (Masner, 1960)
medlia sp. n.
narrata sp. n.
novema sp. n.
octonarius sp. n.
quinclava sp. n.
rufus sp. n.
tanganyikensis (Weld, 1944)
basilewskyi Benoit, 1956
testacea sp. n.
unicolora sp. n.
zeus sp. n.

EUCOILIDAE Thomson

Eucoilidae Thomson, 1862: 397; Eady & Quinlan, 1963: 7. Type-genus: *Eucoila* Westwood [emended].
 Eucoilinae Thomson; Foerster, 1869: 186.

The Eucoilidae is the largest and most widely distributed of the parasitic families in the Cynipoidea. The species form a distinctive group, distinguished from other Cynipoidea by the presence of a raised cup or plate (Fig. 359), which varies in shape and sculpture. They are internal parasites of dipterous larvae, emerging from the puparia (Quinlan, 1978). A number of them are parasites of cereal crop pests and are of sufficient economic importance to warrant close studies of their life histories (James, 1928; Imms, 1930, 1932; Jenni, 1951; Nostvik, 1954; Kerrich & Quinlan, 1960; Masner, 1958, 1960; Carton, 1977; Carton, Roualt & Kitano, 1977; Nordlander, 1978b; Barbotin, Carton & Kelner Pillault, 1979; Tsacas, 1979).

Nineteen genera are at present known to occur in the Afrotropical Region.

Key to the genera of Afrotropical Eucoilidae

- 1 Pronotal plate either distinct in anterodorsal view but not strongly projected forward (Fig. 18), or indistinct viewed dorsally, see *Nordlanderia* (Fig. 11), *Eucoilidea* (Fig. 83). First tergite of gaster, if visible, in form of a narrow ring, sometimes obscured by tergite 2 which never has a hairy ring at base, at most only a few sparse hairs on lower lateral margins; mesopleuron with a distinct suture, or weakly striate (*Microstilba*); mesoscutum shiny, notaulices present though sometimes aberrant or indicated by lines of hairs
- Pronotal plate distinct both in anterodorsal and lateral views, i.e. projected forward from pronotum (Fig. 2). First tergite of gaster, if visible, sometimes in the form of a crenulate ring, without a dense ring of hairs (visible in *Cothonaspis*, *Leptopilina* etc.), or tergite 2 with a

- dense ring of pubescence at base, not always complete on dorsal surface or sometimes with only a few sparse hairs in place of hairy ring; mesopleuron generally with a suture though this can be aberrant or absent; mesoscutum smooth and shiny, satiny or granulate; notaulices generally absent..... 6
- 2 First tergite of gaster not wholly visible in dry-mounted specimens either in dorsal or lateral view, at most in the form of a crescent, obscured by tergite 2 (Fig. 220); notaulices either faintly indicated or with a row of hairs in their place, if visible, at junction with scutellum either converging or parallel (Figs 17, 217)..... 3
- First tergite of gaster usually visible in dorsal and lateral views, distinctly crenulate (Fig. 22); notaulices distinct, sometimes converging sharply on approaching scutellum (Figs 217, 218)..... 5
- 3 Malar space area and supraclypeal area with short protrusions (Fig. 16); area below mesopleural suture coriaceous (Fig. 214); scutellar cup large, oval, excavate on lower half with a number of smaller foveae round outer edge (Fig. 15), scutellar disc reticulate, scutellar foveae aberrant; notaulices distinct, radial cell closed, almost as deep as wide; ♀ antenna clavate, ♂ antenna filiform, segment 3 curved, swollen distally..... **NORDLANDERIA** gen. n. (p. 288)
- Malar space and supraclypeal area without protrusions; area below mesopleural suture smooth, polished; scutellar cup variable in shape, scutellar disc punctate-reticulate (Figs 17, 21); notaulices distinct or aberrant; radial cell open or closed 4
- 4 Scutellar cup large, oval, with a pale rim, concave, punctate within the rim, scutellar disc reticulate-rugose, malar space and supraclypeal area without protrusions; notaulices obsolete anteriorly, widely separated at juncture with scutellar suture (Fig. 17).
Radial cell of forewing generally open, as wide as deep (specimens of this genus with a closed radial have been seen from Trinidad); ♀ antenna weakly clavate, ♂ with segment 3 weakly curved on outer margins **DISORYGMA** Foerster
- Scutellar cup small, polished; scutellar disc reticulate-punctate (Fig. 69); notaulices aberrant, at most represented by a row of hairs, pronotal plate adpressed but distinct, with a large lateral fovea on either side (Fig. 20) **EALATA** gen. n. (p. 257)
- 5 Notaulices broadened apically, sculptured (Fig. 21); scutellar cup very large, concave, extending to apex of scutellar disc, almost obscuring lateral margins of disc, basal margin of cup with a fringe of long setae, rim of cup edged with small foveae. First tergite of gaster distinct, in the form of a crenulate ring or collar, base of tergite 2 with a few scattered hairs (Fig. 22); ♀ antenna subclavate, ♂ with segment 3 curved and swollen distally
DIGLYPHOSEMA Foerster
- Notaulices not generally broadened apically, always smooth; scutellar cup not obscuring scutellar disc laterally (Fig. 74) though sometimes obscuring disc apically, scutellar cup with a large central fovea, sometimes with a ring of minute foveae around lower half and close to edge of cup. First tergite of gaster crenulate, tergite 2 generally the largest viewed laterally. ♀ antenna variable, from filiform to subclavate, ♂ antenna filiform, the 4th segment curved, swollen apically; malar space with a distinct groove, without striations on either side
EUCOILIDEA Ashmead (p. 259)
- 6 Scutellum produced apically to form a distinct spine or viewed dorsally and laterally conical (Figs 10, 350) and overhanging metanotum; pronotal plate with fovea on either side of median bridge, enclosed or open (Figs 30, 228). 7
- Scutellum not produced apically to form a spine or cone, either rounded, emarginate or truncate, sometimes with a tooth on each side but not tridentate, if triangular, or conical viewed dorsally, cup narrow, disc striate and wings emarginate. 10
- 7 Scutellar cup narrow, declined posteriorly, almost reaching apex of scutellar disc (Fig. 10); radial cell of forewing open at base and apex (Fig. 9).
Side margins of pronotum, mesoscutum and lateral bars striate; pronotal plate with lateral fovea open (Fig. 24) **AFRODONTASPIS** Weld (p. 253)
- Scutellar cup variable in shape, not reaching apex of disc nor declined; radial cell of forewing open or closed on wing margin 8
- 8 Pronotal plate, viewed frontally, with a narrow or obsolete medial bridge, fovea on either side enclosed laterally (Fig. 323).
Scutellar disc sharply conical, sometimes almost spine- or beak-shaped, overhanging propodeum (Fig. 292); ♀ antenna clavate-subclavate or with segment 4 of antenna longer than 3, weakly curved on inner margin, sometimes swollen distally; ♂ antenna with segment 3 shorter than 4, 4 longer than each of following segments; radial cell of forewing open or closed (Figs 294, 299) **TRICHOPLASTA** Benoit (p. 310)

- Pronotal plate, viewed frontally, with a wide medial bridge, lateral fovea between anterior and posterior parts open, not bounded by a lateral fusion (Fig. 26) 9
- 9 Head either aciculate, striate or matt on temples and/or vertex; scutellar cup small, occasionally raised; fovea above propodeal spiracle with hairs (Neotropical)
- ODONTEUCOILA** Ashmead
- Head smooth and shining; scutellar cup large, not raised; fovea above propodeal spiracle shallow and hairless. (Neotropical) **CONEUCOELA** Kieffer
- 10 Wing surface very lightly pubescent, at most with a few sparse hairs, most prominent on veins, apical half on both surfaces bare but dotted with hair bases on under surface, almost always with short apical hair fringe on posterior margins; radial cell of forewing closed, R_1 thinner on wing margin than Rs_2 (Fig. 27); pronotal plate, viewed dorsally, in form of collar, viewed anterodorsally, rounded, medial bridge large with lateral fovea open (Fig. 28) 11
- Wing surfaces densely pubescent, ciliate, with distinct hair fringe on apical margins; pronotal plate with lateral fovea open or closed, medial bridge variable in breadth (Fig. 26) 12
- 11 Scutellar cup narrow, declined posteriorly (the usual large posterior fovea not visible in dorsal view) (Fig. 29); base of forewing smoky, radial cell partially closed on wing margin; pronotum either side of pronotal plate canaliculate (Fig. 30); pronotal plate (Fig. 30); ♀ antenna subclavate-clavate, ♂ antennal segments 3 and 4 modified
- BOTHROCHACIS** Cameron
- Scutellar cup large, rounded, elevated, not declined posteriorly (cf. Fig. 43); base of forewing clear, radial cell nearly always closed on wing margin; pronotal plate in the form of a collar viewed dorsally (Fig. 28); ♀ antenna moniliform, ♂ antennal segment 4 swollen distally
- EUCOILA** Westwood
- 12 Pronotal plate with lateral fovea between anterior and posterior parts closed laterally (Fig. 246) 13
- Pronotal plate with lateral fovea open (Fig. 34). 15
- 13 Head with pyriform protuberances on inner orbits of face (Figs 31, 32), supraclypeal area of face with a large trumpet-shaped protrusion **STENTORCEPS** Quinlan (p. 309)
- Head without the above characters 14
- 14 Scutellar cup large, with a large central fovea and a small transverse fovea below it, scutellar disc smooth, polished; ♀ antenna filiform **DARUNA** Benoit
- Scutellar cup small, long and narrow with minute pits, scutellar disc reticulate to almost smooth and polished; ♀ antenna invariably clavate, rarely filiform, club segments usually darker than basal segments.
- Anteroventral cavity of mesopleura distinct, some times reduced; propodeum densely pubescent; radial cell of forewing closed on wing margin **RHOPTROMERIS** Foerster (p. 290)
- 15 First tergite of gaster distinct, in the form of a crenulate or furrowed ring, abruptly widened posteriorly. Second tergite of gaster with a few sparse hairs at base, never with a dense ring of hairs (Fig. 33); scutellar cup elliptical, scutellar disc rounded behind, surface with weak reticulate sculpture, sides of propodeum lacking pubescence; wings narrow, rounded apically, radial cell of forewing closed on wing margin though sometimes indistinctly so, cubitus (M) not or barely indicated.
- ♀ antenna with or without a distinct club, ♂ antenna filiform, 4th segment sinuate, longer than either 3rd or 5th (Fig. 360); pronotal plate with lateral fovea open (Fig. 60); anteroventral cavity of metapleura absent **COTHONASPIS** Hartig (p. 255)
- First tergite of gaster not always visible, if visible, tergite 2 with a dense ring of hairs at base and wings broad; or base of tergite 2 with a distinct ring of hairs, though neither dense nor complete on dorsal surface; scutellar cup variously shaped, disc sculpture variable, sides of propodeum with dense pubescence; wings broad, never narrow, radial cell of forewing open or closed, apex of forewing rounded or incised 16
- 16 Brachypterous or fully winged, apex of wings either incised, arcuate or truncate, cubitus (M) not distinct, radial cell of forewing distinctly open on wing margin, vein R_1 thickened at apex near margin of forewing, $2rm$ thickened, areolet absent, $Rs+M$ usually absent (Figs 8, 177) or wings short, not extending to apex of gaster; scutellar cup small, not extending to apex of longitudinally striate scutellar disc which is either rounded, conical or in some species spine- or beak-shaped.
- Tergite 2 of gaster with a hairy ring at base, not usually complete on dorsal surface (Fig. 36); ♀ antenna clavate, ♂ antenna filiform, segment 3 elongate, curved, viewed dorsally, outer margin flattened (Fig. 225) **KLEIDOTOMA** Westwood (p. 280)
- Fully winged, never brachypterous, apex of forewing rounded, rarely truncate, venation not as

- above, radial cell open or closed on wing margin, scutellar cup and disc variable in size, shape and sculpture, disc rarely striate 17
- 17 Mesopleural suture either absent or indistinct (Fig. 37); frons prominent in ♂, less so in ♀; wings in ♀ of normal length (generally shortened in British specimens); scutellar cup raised above level of scutellar disc which is striate to reticulate-rugose; sides of pronotal plate and propodeum with dense tufts of pubescence (usually yellowish white); tergite 2 of gaster with a dense felt-like ring of pubescence; antenna of ♀ filiform, segment 3 of ♂ antenna in type species equal to 4+5 (see note) (in African species 3 is shorter than 4+5; radial cell of forewing open or closed) **GLAURASPIDIA** Thomson
- Without the above combination of characters; mesopleural suture generally present; pronotum and propodeum without dense felt-like tufts; tergite 2 of gaster with hairy ring variable in density of pubescence; ♀ antenna usually clavate, ♂ antenna filiform, 3rd or 4th segment sometimes modified 18
- 18 Scutellar cup narrow, elliptical, disc reticulate-striate, rounded at apex; radial cell of forewing open on front margin (R_1 projecting slightly on the margin but not joining Rs_2 to form a closed radial cell) (Fig. 38); tergite 2 of gaster with a ring of pubescence, generally complete on dorsal surface.
♀ antenna clavate, ♂ antenna with segment 3 longer than 4, sharply curved on outer margin (Fig. 39), swollen distally; pronotal plate with lateral pits or fovea open (Fig. 40), with tufts of pubescence on either side (in some species mesopleural suture aberrant or absent) **HEXACOLA** Foerster (p. 272)
- Scutellar cup variable in shape, sculpture of scutellar disc variable, sometimes smooth, never striated as in *Kleidotoma*; radial cell of forewing open or closed on wing margin; tergite 2 of gaster with ring of pubescence at base dense or weak, sometimes complete on dorsal surface. 19
- 19 Tergite 2 of gaster with ring of hairs at base present but rather thin or sparse, not usually complete on dorsal surface, not obscuring tergite 1 which is crenulate to reticulate-crenulate (Fig. 41), abruptly widened posteriorly (anteroventral cavity of mesopleura present).
♂ antenna filiform, segments 3 and 4 subequal in length, 4th slightly flattened on outer margins (Fig. 361); ♀ antenna long, slender, with club segments sometimes only indicated by presence of rhinaria (Fig. 362) **LEPTOPILINA** Foerster
- Tergite 2 of gaster with a dense ring of pubescence at base, obscuring tergite 1 completely, complete on dorsal surface, not woolly in appearance.
Scutellar cup elevated, variable in size and shape from oval to almost circular, scutellar disc sculpture variable, from reticulate to reticulate-punctate, lateral bars of scutellum usually striate, especially on lateral margins; pronotal plate variable in size and shape, lateral fovea between anterior and posterior parts open 20
- 20 Scutellar cup almost flat, mirror-like, elliptical, if raised above level of disc then only very slightly (Fig. 44), scutellar disc closely punctate-reticulate, apical margin weakly conical (Fig. 44); lateral bars of scutellum weakly striated on lateral margins, polished dorsally; pronotal plate with lateral fovea between anterior and posterior parts small, not sharply delineated; apex of wing rather blunt, radial cell of forewing usually closed; ♀ antenna clavate or filiform, ♂ antenna filiform, 4th segment modified **GANASPIDIA** Foerster
- Scutellar cup almost circular, well elevated above scutellar disc, rugose to rugose-foveolate, apical margin rounded (Fig. 359), lateral bars of scutellum usually striate on dorsal and lateral surfaces; pronotal plate large, lateral fovea open, clearly delineated (Fig. 12); apex of forewing rounded, radial cell of forewing open or closed; ♀ antenna usually clavate, ♂ antenna filiform, segment 4 usually swollen (Fig. 46) **TRYBLIOGRAPHIA** Foerster

AFRODONTASPIS Weld

Afrodontaspis Weld, 1961: 280. Type-species: *Coneucoela striatissima* Benoit, by original designation.

DIAGNOSIS. ♀ antenna 13-segmented, subclavate, ♂ antenna 15-segmented. Pronotum, mesoscutum, mesopleura and lateral bars striate (Figs 10, 49, 50, 51). Scutellum with a long narrow cup extending almost to apex of scutellar disc, the usual large basal fovea on cup declined (not visible in dorsal view), scutellar disc falling sharply away from cup, with crenulate sculpture (Fig. 10); either side of pronotal plate with a tuft of dense yellow-white pubescence; base of tergite 2 of gaster with dense hairy ring obscuring tergite 1. Wings clear, not ciliate, dotted with hair bases, lower margins with a weak fringe of hairs.

DISTRIBUTION. Zaire; Uganda.

Key to the species of *Afrodontaspis* Weld

- 1 Head behind eye (vertex) strigose, viewed frontally, strongly coriaceous, face coriaceous-reticulate. Pronotal plate (Fig. 47); mesoscutum with fine longitudinal striations (Fig. 50); apical segment of antenna $2\times$ as long as wide; antenna yellowish, thorax and gaster reddish brown; segments 2–5 of gaster visible in lateral view (Fig. 48)..... *striatissima* (Benoit) (p. 254)
- Head behind eye (vertex) strongly aciculate, viewed frontally, face with weak radiating striae. Pronotal plate (Fig. 49); mesoscutum with broad longitudinal striations (Fig. 50); apical segment of antenna $2.5\times$ as long as wide; antenna brown, thorax black, gaster reddish brown; segments 2–3 of gaster visible in lateral view *lanatus* sp. n. (p. 254)

Afrodontaspis lanatus sp. n.

(Figs 10, 49, 51, 52, 53, 54)

DESCRIPTION. ♀. Antenna 13-segmented, clavate, 7–13 with rhinaria forming a weak club, 3–6 subequal in length and breadth, 7–13 each weakly swollen, 7–10 each same length as segments 3–6, 11–13 each longer than 7 (Fig. 52). Head, viewed frontally, longer than wide, vertex coriaceous, eyes further apart measured medially than height of an eye, face with closely spaced radiating striate sculpture converging towards frontal line area which is coriaceous (Fig. 53), malar groove not conspicuous in the striate sculpture, clypeus coriaceous, mandibles tri-dentate, occiput and vertex strigose-coriaceous. Pronotal plate produced forward, medial bridge between anterior and posterior parts narrow, fovea or lateral cavities open laterally (Fig. 49), these cavities filled with dense pubescence extending out from and on sides of fovea. Pronotum, viewed dorsally, striated; mesoscutum longitudinally striated, weakly so medially (Fig. 51); lateral bars of scutellum striate, scutellar fovea large, deep, separated by a long thin ridge with scutellar cup declined posteriorly, scutellar disc coriaceous in dorsal view, tongue-shaped apically, lateral margins of apex of disc crenulate (Fig. 10); carinae of propodeum bowed medially, pubescent on outer margins. Mesopleura completely transversely striate. Segment 1 of gaster completely obscured by dense ring of pubescence at base of tergite 2, woolly in appearance, tergites 2–3 of gaster visible in lateral view, segment 2 the largest, occupying most of visible area, ventral spine and hypopygium barely visible; coxae and femora finely coriaceous, tibiae and tarsi finely and densely strigose, pubescent, tibiae with two apical setae. Wings not ciliate, without apical hair fringe, surface of wings dotted with hair bases, radial cell of forewing open on wing margin (vein R_1 not reaching margin of wing, but indicated by pigmentation), $Rs+M$ and M very weakly indicated by a trace of pigmentation (Fig. 54). Colour: antenna yellowish brown, head and thorax blackish, gaster chestnut-red.

♂ unknown.

MATERIAL EXAMINED

Holotype ♀, **Zaire**: Kaziba, affl.g. Senze s. affi. dr. Lufira, 1140 m, 15–27.ii.1948 (*G. F. de Witte*) (MRAC).

Paratypes. **Zaire**: 4 ♀ (MRAC). **Kenya**: 1 ♀ (BMNH).

REMARKS. This species is closely related to *striatissima* but separated by the different sculpturing on the head and mesoscutum. A larger and darker species. Size 3 mm.

Afrodontaspis striatissima (Benoit)

(Figs 10, 50, 56)

Coneucoela striatissima Benoit, 1956: 533. Holotype ♀, **ZAIRE** (MRAC) [examined].

Afrodontaspis striatissima (Benoit) Weld, 1961: 280.

DESCRIPTION. ♀. Antenna 13-segmented with 3-segmented club, club segments with rhinaria, remainder with granulate sculpture, segments 3–10 subequal in length, each wider apically than at base. Head, viewed frontally, strongly coriaceous, frontal area raised with weak impressed sculpture extending to base of clypeus, mandibles tridentate, head, viewed dorsally, finely coriaceous, back of head strigose. Pronotal plate large; pronotum longitudinally striate (with a dense tuft of pubescence on medial margins) (Fig. 50). Mesopleura strongly and broadly striated on lateral margins, weakly strigose to smooth medially. Lateral bars of scutellum striate. Scutellar disc ending in a blunt spine, scutellar fovea large, half as long as entire scutellum, scutellar cup very narrow, extending to base of scutellar spine, the usual large basal fovea on cup declined, dorsal surface of scutellar disc coriaceous, lateral margins sharply declined with large adpressed crenulations (*cf.* Fig. 10); carinae of propodeum bowed. Base of tergite 2 of gaster with dense ring of pubescence obscuring tergite 1 from view, tergites 2–5 visible in lateral view, the apical margins finely

punctate, tergite 2 the largest (Fig. 48). Femur and tibia with reticulate-coriaceous sculpture, tibia with striated sculpture, tarsus 5-segmented. Wings with hair fringe on hind margin only, surface dotted with hair bases, not ciliate, radial cell of forewing open basally (vein R_1 not reaching margin of wing), $Rs+M$ and M not indicated (Fig. 56). Colour: antenna orange-yellow, head blackish red, thorax and gaster chestnut-red, legs orange-yellow.

♂. Antenna 15-segmented, segment 3 $3.5 \times$ length of 4, 4–15 subequal in length, narrower at apex; sculpture of head and thorax similar to ♀.

MATERIAL EXAMINED

Zaire: 1 ♀ (holotype), Rutshuro, xii.1937 (*J. Ghesquière*) (MRAC).

Uganda: 1 ♀, 20 ♂ (BMNH); **Zaire:** 44 ♀ (MRAC).

REMARKS. This species is separated from *lanatus* by the sculpture of the head and thorax. A much smaller species. Size 2 mm.

COTHONASPIS Hartig

Cothonaspis Hartig, 1840: 201. Type-species: *Cothonaspis pentatoma* Hartig, by original designation. *Psilosema* Keiffer, 1901: 160. Type-species: *Psilosema giraudi* Dalla Torre & Keiffer, by subsequent designation, Rowher & Fagan, 1917: 374. [Synonymy by Weld, 1952: 243.]

DIAGNOSIS. ♀ antenna 13-segmented with apical segments forming a club (Fig. 57), ♂ antenna 15-segmented, the fourth segment swollen, longer than third or fifth. Head, viewed frontally, spherical, as wide almost as thorax, genae broad, eyes round, further apart measured medially than height of an eye. Pronotal plate projected forward, anterior and posterior parts not fused laterally, i.e. fovea or cavities open (Fig. 34). Mesoscutum smooth, polished, notaulices absent, in some species long scattered hairs present; scutellar cup elongate, narrow, broader basally, scutellar disc with radiating striae, lateral bars smooth, polished, scutellar foveae ovoid, smooth. Propodeal carinae parallel, propodeum produced to form a neck-shaped nucha, hairless laterally. Segment 1 of gaster short, broad, in form of a crenulate ring, base of tergite 1 without a ring of pubescence, at most a few sparse hairs present, gaster compressed laterally. Wings narrow, rounded apically, surface normally pubescent, with a longish hair fringe on apical margins, radial cell of forewing closed on distal margin though in a few species it appears open due to absence of a complete vein, i.e. pigmentation only present.

DISTRIBUTION. Europe; South Africa; North and South America.

DISCUSSION. *Cothonaspis* is separated from the closely related *Leptopilina* by the form of the thorax and the lateral margins of the propodeum. In *Cothonaspis* the thorax is elongate and the lateral margins of the propodeum are not noticeably hairy. Two Afrotropical species have at one time or another been assigned to the supposed subgenera of *Cothonaspis*. *Erisphagia mahensis* Kieffer was placed in *Cothonaspis* (*Erisphagia*) by Weld (1952: 244), and Nordlander (1980) transferred it to *Leptopilina* Foerster. *Psilosema fenerivae* Kieffer, a species based on a male from Madagascar but not located, is not accounted for in this paper. Two further species are described and compared with *Cothonaspis pentatoma*, the type-species of the genus.

BIOLOGY. The European species of *Cothonaspis* are associated with Sepsidae in cow dung (Nordlander, 1976; Quinlan, 1978).

Key to the species of *Cothonaspis* Hartig

Females

- 1 Antennal club 5-segmented, apical segments not contrasted to basal or medial segments; scutellar cup not extending to apex of disc, apex of disc rounded (Fig. 57) 2
- Antennal club 7-segmented, apical 3–4 segments orange-yellow in contrast to the brownish basal and medial flagellar segments (Fig. 59); scutellar cup elongate, extending almost to apex of the almost truncate scutellar disc (Fig. 71); apex of gaster finely punctate..... *dulcis* sp. n. (p. 256)
- 2 Tergites 1–2 of gaster visible in lateral view, gaster without a dense hair patch, scutellar disc with radiating striate sculpture; mesopleura strigose above mesopleural suture; lateral bars of scutellum striate on dorsal surface; hind coxa clearly strigose *pentatoma* Hartig (p. 256)
- Tergites 1–4 of gaster visible in lateral view, base of tergite 2 with a patch of short pubescence on lower lateral margins; scutellar disc with broken areolate sculpture; mesopleura smooth and polished above mesopleural suture; lateral bars of scutellum polished on dorsal surface; hind coxa smooth, polished..... *calis* sp. n. (p. 256)

Cothonaspis dulcis sp. n.

(Figs 59, 60, 71)

DESCRIPTION. ♀. Antenna 13-segmented, clavate, segments 3 and 4 subequal, 5 shorter than 4, 6 shorter than 5, 7-13 forming a distinct club, all club segments with rhinaria (Fig. 59). Head, viewed frontally, with eyes further apart than height of an eye measured medially, cheeks converging towards clypeal area, malar groove distinct. Pronotal plate projected forward, anterior and posterior parts bridged medially, lateral fovea open on margins (Fig. 60). Mesoscutum smooth, polished, scutellar fovea smooth, shallow, lateral bars polished, scutellar disc almost truncate viewed dorsally, surface reticulate-rugose, scutellar cup long, narrow, narrower apically than medially, extending almost to apex of disc (Fig. 71). Propodeal carinae parallel, weakly pubescent on lateral margins, mesopleurae smooth, polished, mesopleural suture complete, a few rugae present below suture adjacent to lateral margins of pronotal plate, metapleura polished. Segment 1 of gaster short, broad, crenulate, in form of a ring, tergite 2 the largest, tergites 3 and 4 visible in lateral view, apex of tergite 2 and whole of visible parts of 3 and 4 finely punctate, tergite 2 with a small tuft of hairs on lateral margins not prominent or obscuring tergite 1, hypopygium not pronounced, ventral spine not visible. Legs long, slender. Wings long, narrow, rounded apically, surface pubescent with apical hair fringe, radial cell of forewing closed on wing margin. Colour: antenna dark yellow basally, brownish medially, apical 3-4 segments light yellow, head reddish black, thorax and gaster chestnut-brown, legs orange-brown.

♂ unknown.

MATERIAL EXAMINED

Holotype ♀, **Zaire**: Kibati, 1000 m, 10-12.i.1934 (*G. F. de Witte*) (MRAC).Paratypes. **Zaire**: 21 ♀ (MRAC). **Madagascar**: 1 ♀ (MNHN).*Cothonaspis ealis* sp. n.

(Figs 61, 62)

DESCRIPTION. ♀. Antenna 13-segmented, with 5-segmented club, segment 3 longer than 4, 4 longer than 5, 6-8 subequal, each slightly longer than 5 (Fig. 61). Head, viewed frontally, rounded, eyes oval, face smooth, shining, with sparse scattered hairs, malar groove percurrent, vertex smooth. Pronotal plate produced forward, anterior and posterior parts connected medially, lateral margins, i.e. fovea, open laterally (Fig. 62); pronotum weakly striated on dorsal surface adjacent to mesoscutum; mesoscutum smooth, polished, with a few scattered hairs; lateral bars of scutellum smooth, polished, scutellar fovea shallow, almost as broad as long, scutellar disc polished, with trace of broken striae, apex rounded, cup small, long, narrow. Propodeal carinae parallel, without pubescence on lateral margins, propodeum elongate, carinate, hairless; mesopleural suture complete, mesopleurae smooth, polished; metapleura ridged, anteroventral cavity distinct, with a few setae. Segment 1 of gaster short, broad, in the form of a crenulate ring, tergite 2 the largest, smooth, polished, without a ring of pubescence at base, impunctate, tergites 3 and 4 partially visible in lateral view, hypopygium not pronounced, ventral spine not visible. Legs short, robust, tarsal segments longer than tibia. Wings pubescent, margins ciliate, radial cell of forewing closed on wing margin. Colour: antenna light brown, head, thorax and gaster brown-black, legs yellowish.

♂ unknown.

MATERIAL EXAMINED

Holotype ♀, **South Africa**: Cape Town, Milnerton, i.1926 (*R. E. Turner*) (BMNH).*Cothonaspis fenerivae* (Kieffer)

Psilosema fenerivae Kieffer, 1910a: 534; Weld, 1952: 243. Holotype ♂, **MADAGASCAR**: Fenerive, vii. (*Voeltzkow*) (depository unknown).

Kieffer's description is based on a male and could fit a number of species.

Cothonaspis pentatoma Hartig

(Figs 57, 58, 63)

Cothonaspis pentatoma Hartig, 1840: 201. Holotype ♀, **GERMANY** (MNHN) [examined].*Eucoila* (*Pentamerocera*) *pentatoma* (Hartig) Kieffer, 1901: 175.*Cothonaspis* (*Cothonaspis*) *pentatoma* Hartig Weld, 1952: 242.

DESCRIPTION. ♀. Antenna 13-segmented with a 5-segmented club, segment 3 subequal to 4+5, 4 longer than 5 (8th segment weakly swollen but not regarded as a club segment, rhinaria are not present as in the five apical segments) (Fig. 57). Head, viewed frontally, rounded, eyes normally rounded, smallish, malar space area striated, face with sparse hairs, maxillary palp 4-segmented, labial palp 2-segmented, vertex strigose. Pronotal plate projected forward, anterior and posterior parts connected medially, lateral margins open, i.e. fovea open laterally (Fig. 58); mesoscutum smooth, polished, with sparse hairs, notaulices absent. Lateral bars of scutellum striate dorsally, polished, scutellar fovea smooth, shallow, as broad as long, scutellar disc with longitudinal or radiating ridges, cup small, slightly longer than broad. Propodeal carinae pronounced, parallel, propodeum elongated in lateral view, a few sparse hairs present (Fig. 63). Mesoscutum, in lateral view, long, slender. Mesopleural suture complete, strigose above suture, metapleura ridged, anteroventral cavity indicated. Segment 1 of gaster broad, short, canalliculate, tergite 2 the largest in lateral view, with a few long hairs at its base. Legs long, slender, fore and mid-legs of similar size and shape, hind-leg larger, tarsi short, hind coxa strigose. Wings narrow, rounded apically, surface pubescent with hair fringe on apical margin, radial cell of forewing closed (sometimes indistinctly so, due to presence only of pigmentation, the vein becoming vestigial). Colour: antenna brownish, head and thorax black, gaster dark brownish black, chestnut-red basally. Legs brownish basally, yellowish apically.

REMARKS. Although *pentatoma* appears to be known only from Europe it is included in the key to species to facilitate identification and comparison with the two Afrotropical species.

***EALATA* gen. n.**

(Figs 19, 20, 69)

Type-species: *Ealata clava* sp. n.

DIAGNOSIS. ♀ antenna 13-segmented, clavate, ♂ antenna 15-segmented, filiform, segment 3 curved, subequal in length to segment 4. Pronotal plate not projected forward, anterior part wider than posterior part, fovea large, not enclosed on lateral margin (Fig. 20). Mesoscutum smooth, polished, notaulices weakly indicated basally, foveae broader than long, kidney-shaped; scutellar disc reticulate-rugose, weakly rounded apically, scutellar cup oval, slightly longer than broad, raised, with a weak depression apically, with a pale-edged rim (Fig. 69). Propodeum with bowed carinae, pubescent on either side. Mesopleura smooth, polished, suture complete. Segment 1 of gaster partially visible, sculptured, in form of a crescent, tergite 2 the largest in lateral view, without a ring of pubescence at base, at most with a few scattered hairs on lateral margins. Wings pubescent, apical margins with a hair fringe, radial cell of forewing closed on wing margin (Fig. 19). Legs of normal size and shape, coxae with a fringe of hairs on margins viewed laterally, dark brown, femora, tibiae and tarsi orange-yellow with usual pubescence.

DISTRIBUTION. Afrotropical Region.

DISCUSSION. This genus superficially resembles *Leptopilina*. However, the pronotal plate is not projected forward, and the notaulices, though aberrant, are indicated at least on the anterior of the mesoscutum. Tergite 2 of the gaster has a few hairs present laterally, never with a ring of pubescence, however thin. *Ealata* is closely related to *Nordlanderia*, *Disorygma* and *Diglyphosema*. It is separated from *Disorygma* by the mesoscutum and the form of the scutellar cup.

Key to the species of *Ealata* gen. n.

- 1 Antenna of ♀ with 6-segmented club; hypopygium not protruding (Fig. 67) 2
- Antenna of ♀ with 7-segmented club; hypopygium protruding (exceptionally long) (Fig. 64) *marica* sp. n. (p. 258)
- 2 Antennal segments 8–13 forming a distinct club, rhinaria very distinct on apical three segments, all club segments wider apically than basally in contrast to basal segments (Fig. 65) *saba* sp. n. (p. 258)
- Antennal segments 8–13 forming a very weak club, rhinaria present, all segments at least 2 × as long as wide, not wider apically than basally (Fig. 66) *clava* sp. n. (p. 257)

***Ealata clava* sp. n.**

(Figs 20, 66, 67, 69, 72)

DESCRIPTION. ♀. Antenna 13-segmented, clavate, segment 3 1.5 × length of 4, 4, 5 and 6 subequal in length, 7 almost twice length of 6, 8–13 forming a club though segment 7 could be mistaken for a club

segment (see note), apical segment shorter than 11+12 (Fig. 66). ♂ antenna 15-segmented, filiform, 3 and 4 subequal in length, 3, viewed dorsally, weakly curved. Face, viewed frontally, smooth, polished, with scattered hairs, malar suture distinct, eyes weakly converging. Pronotum pubescent either side of pronotal plate, plate not projected forward, anterior part much wider than posterior part, lateral foveae large, not enclosed (Fig. 20). Mesoscutum on lateral margin of pronotum from tegulae to pronotal plate channelled, notaulices very weakly indicated anteriorly (best seen viewed laterally), lateral bars of scutellum polished, scutellar foveae shallow, polished, scutellar cup small, convex, polished, with apical depression, disc reticulate-rugose (Fig. 69), rounded apically. Propodeal carinae bowed, densely pubescent on either side. Mesopleural suture complete. Segment 1 of gaster partially visible, in form of crenulate ring, obscured in part by tergite 2, lateral margins of tergite 2 with a few sparse hairs at base; tergite 2 the largest in lateral view, remaining segments not always visible, surface smooth, shining, hypopygium pronounced (Fig. 67). Wing surface pubescent, apical margins with hair fringe, radial cell of forewing closed on the margin, cubitus (*M*) not indicated (Fig. 72). Legs long, slender. Colour: femora brownish yellow, head, thorax and gaster blackish, base of gaster orange, legs orange-yellow.

♂. Antenna 15-segmented, segment 3 weakly curved, same length as 4.

MATERIAL EXAMINED

Holotype ♀, **Zaire**: Eala, ii.1935 (*J. Ghesquière*) (MRAC).

Paratypes. **Cameroun**: 2 ♀ (BMNH). **Kenya**: 1 ♀ (BMNH). **Mauritius**: 1 ♂ (BMNH). **South Africa**: 2 ♀ (BMNH). **Uganda**: 2 ♀ (BMNH). **Principe Is.**: 1 ♀ (BMNH). **Zaire**: 34 ♀, 19 ♂ (MRAC).

DISCUSSION. This species is separated from others in the genus by the club segments; these can be easily counted and comprise seven segments, but rhinaria are not present on the seventh. The sixth segment, although very similar in shape to the other club segments, does not have rhinaria and is therefore not regarded as a true club segment.

Ealata marica sp. n.

(Figs 19, 20, 64, 69)

DESCRIPTION. ♀. Antenna 13-segmented, subclavate, segment 3 1.3 × length of 4, 4, 5 and 6 subequal in length, 7–13 forming a club, each club segment with rhinaria, weakly swollen medially, apical segment shorter than 11+12 (Fig. 66). Face, viewed frontally, smooth, polished, with scattered hairs, malar suture distinct, eyes as far apart measured medially as height of an eye. Pronotal plate not projected forward, anterior part wider than posterior part, the lateral foveae large, not enclosed (*cf.* Fig. 20). Mesoscutum channelled from lateral margins to pronotal plate, notaulices not indicated, sparse hairs present in their place, lateral bars of scutellum polished, scutellar foveae shallow, wider than long, scutellar cup small, slightly longer than wide, not extending to apex of disc, scutellar disc finely reticulate-rugose, apex rounded (*cf.* Fig. 69); propodeum obscured by pubescence, mesopleural suture complete, metapleura densely pubescent, propodeum extended. Segment 1 of gaster in form of a crenulate ring, obscured by base of tergite 2, tergite 2 the largest, with two or three hairs basally on lateral margins, remaining segments not visible, hypopygium long, narrow (Fig. 64). Wing surface densely pubescent, margins with apical hair fringe, radial cell of forewing closed on margin, long, narrow (Fig. 19). Legs short, stout, hind coxa swollen medially, tibia as long as tarsus. Colour: antenna orange-yellow, head, thorax and gaster dark brownish black, legs, coxa brownish black, femora, tibiae and tarsi orange-yellow.

♂ unknown.

MATERIAL EXAMINED

Holotype ♀, **Zaire**: Kivu, Rutshuru, 1285 m, 11.vii.1935 (*G. F. de Witte*) (MRAC).

REMARKS. This species is easily distinguished by the antenna and extremely long, narrow hypopygium.

Ealata saba sp. n.

(Figs 19, 20, 65)

DESCRIPTION. ♀. Antenna 13-segmented, clavate, with distinct 6-segmented club, club segments except apical slightly longer than broad, clearly wider apically than basally, apical segment as long as 11+12 (Fig. 65), segment 3 longer than 4, 4–7 subequal in length, 7 shorter than 8. Face, viewed frontally, smooth, polished, with scattered hairs, malar groove distinct, eyes weakly converging, mandibles tridentate. Pronotum sparsely pubescent either side of pronotal plate, plate not projected forward, anterior part much wider than posterior part, lateral foveae large, not enclosed (*cf.* Fig. 20). Mesoscutum smooth, polished, notaulices absent, a row of hairs in their place, lateral bars of scutellum polished, scutellar foveae wider

than long, smooth, shallow, scutellar cup small, almost oval, scutellar disc reticulate-rugose with scattered pubescence, apex weakly conical viewed dorsally, propodeum elongate in lateral view, propodeal carinae bowed basally, inner surface sculptured. Mesopleural suture complete, metapleura ridged on upper half, anteroventral cavity with tuft of hairs. Segment 1 of gaster partially visible, in form of a crenulate ring, tergite 2 the largest, occupying whole of visible area in lateral view, obscuring tergite 1, base of tergite 2 without hairs, hypopygium not pronounced, with a few hairs on ventral surface. Wing surface pubescent with apical fringe of hairs, radial cell of forewing closed on wing margin, elongate (cf. Fig. 19); legs short and stout, hind coxa swollen, elongate, mid- and fore coxae smaller, femora short, swollen medially, tibiae and tarsi slender, fore and mid-tibiae shorter than tarsus, hind tibia and tarsus subequal in length. Colour: antenna brownish yellow, head and thorax brownish, gaster chestnut-red; legs: coxae orange, femora, tibiae and tarsi yellow.

♂ unknown.

MATERIAL EXAMINED

Holotype ♀, **Nigeria**: Ibadan (*B. R. Critchley*) (BMNH).

Paratypes. **Nigeria**: 4 ♀ (BMNH). **Rhodesia**: 1 ♀ (BMNH). **South Africa**: 2 ♀ (BMNH). **Uganda**: 2 ♀ (BMNH). **Zaire**: 6 ♀ (MRAC).

REMARKS. This species is separated from *clava* by the distinctive antennal club (Fig. 65).

EUCOILIDEA Ashmead

(Figs 84, 86, 93, 101)

Eucoilidea Ashmead, 1887: 154. Type-species: *Eucoilidea canadensis* Ashmead, by subsequent designation, Ashmead, 1903: 60.

Afrostitilba Benoit, 1956: 544. Type-species: *Afrostitilba nitida* Benoit, by monotypy. **Syn. n.**

DIAGNOSIS. ♀ antenna usually 13-segmented, clavate to almost filiform, club segments distinguished by presence of rhinaria, ♂ antenna 15-segmented. Face smooth, shining, malar space with a distinct epistomal suture (malar ridge), mandibles tridentate. Pronotal plate weakly protruding viewed dorsally, cavities either side of median bridge open laterally (Fig. 101). Pronotum either side of pronotal plate polished to strongly aciculate. Mesoscutum smooth, polished, notaulices complete, distinct, converging on approach to scutellum where medial distance between notaulices can vary (Figs 86, 93); lateral bars of scutellum smooth, scutellar fovea deep, scutellar cup variable, from oval to round to elongate, scutellar disc usually visible laterally and apically though this is sometimes overlapped apically by scutellar cup, apex of disc rounded (Figs 86, 93, 97). Segment 1 of gaster sulcate, short, as broad as long, segment 2 occupying almost whole of visible part of gaster in lateral view (Fig. 14), surface without punctures at ×45 magnification. Wings with apical fringe of hairs, surface pubescent, radial cell of forewing closed on wing margin (Fig. 84).

DISCUSSION. The holotype of *Eucoilidea canadensis* Ashmead is a ♀ and has its antenna missing and is badly obscured by glue. Nineteen species, including seventeen newly described, are recognized from the Afrotropical region. Weld (1952) states that the antenna in the ♀ of *canadensis* has the third segment slightly longer than the fourth, without a distinct club, ♂ with segment three twice the length of four and strongly bent. In a ♀ from the West Indies the third segment is slightly shorter than four. The holotype would run in the present key to *dubia* but differs in the ratios of the antennal segments, the shape of the cup and the acuteness of the notaulices on approaching the scutellum. *Afrostitilba* is here synonymised with *Eucoilidea* after comparison with related genera. First examination of *Afrostitilba*, using Weld's key (1952) based on scutellar characters, distinguishes it from *Eucoilidea* by the absence of striations in the malar area of the face together with scutellar differences which also separate it from *Microstitilba*. However, the emphasis given to the scutellar characters after comparison with the holotype of *Eucoilidea canadensis* and the species described here do not merit a separate genus. *Eucoilidea* has been recorded by Weld (1952) from the U.S.A., Mexico, Hawaii and the Philippines. The type-species is from Canada. Undescribed species of *Eucoilidea* from India and Singapore are in the BMNH. *Afrostitilba nitida* Benoit is transferred to *Eucoilidea*.

DISTRIBUTION. North and South America, Hawaii, Philippines, South Africa.

Key to the Afrotropical species of *Eucoilidea* Ashmead

Females

- 1 Antenna 14-segmented; notaulices converging sharply towards scutellum (cf. Fig. 74); scutel-

- lar disc reticulate-rugose, scutellar cup large, extending to apex of disc, obscuring apical margins; tergites 2–4 of gaster visible in lateral view, finely punctate *extraria* sp. n. (p. 265)
- Antenna 13-segmented; notaulices either sharply converging or gently converging towards scutellum (Figs 85, 97); scutellar disc visible laterally and sometimes apically; tergite 4 of gaster sometimes visible in lateral view, gaster either impunctate or punctate on apical margins (Figs 94, 100)..... 2
- 2 Apical margins of either tergite 2 of gaster, or 3 and 4 when visible, with dense fine punctures on apical margins, or apical tergites not strongly compressed (Fig. 77)..... 3
- Apical margins of gastral tergites without dense punctation or apical tergites of gaster strongly compressed laterally, with very sparse punctation on the apical margins (Figs 94, 116, 119).... 11
- 3 Antennal segments filiform or subclavate, segments 3 and 4 subequal in length (Fig. 81), or segment 4 longer than 3; *Rs* and *M* of forewing present or absent 6
- Antenna subclavate or filiform, segment 3 at least $1.2 \times$ length of 4; segments 1–4 of gaster normally visible in lateral view 4
- 4 Antenna filiform, segments 4–13 with rhinaria (Fig. 129); veins *Rs+M* and *M* of forewing indicated (Fig. 130)..... 5
- Antenna clavate, club 8-segmented, segment 3 weakly curved (Figs 79, 144); veins *Rs+M* and *M* of forewing not indicated, radial cell of forewing $2 \times$ as long as broad (Fig. 147); gaster finely punctate, tergites 1–4 normally visible in lateral view, hypopygium prominent (Fig. 145) *trulla* sp. n. (p. 271)
- 5 Tergites 1–2 of gaster visible in lateral view, tergite 2 densely, coarsely punctate on apical half; radial cell of forewing $2.6 \times$ as long as wide (Fig. 78); scutellar cup extending to and obscuring apex of scutellar disc (*cf.* Fig. 132); legs yellowish..... *marcellus* sp. n. (p. 268)
- Tergites 1–3 of gaster visible in lateral view, tergites 2 and 3 finely punctate; radial cell of forewing $3.6 \times$ as long as wide (Fig. 80); scutellar cup elongate, scutellar disc visible laterally and apically, legs bright orange-yellow *tyrus* sp. n. (p. 271)
- 6 Segment 4 of antenna clearly longer than 3, at least $1.2 \times$ as long as wide (Fig. 81); notaulices converging sharply towards scutellum; pronotum strongly aciculate (Fig. 83)..... 7
- Segment 3 longer than or subequal in length to 4 (Fig. 127); notaulices converging sharply or gently towards scutellum 8
- 7 Antenna subclavate, segments 5–7 equal in length, 8–12 each progressively shorter than preceding segment; pronotum with long scattered pubescence; radial cell $2 \times$ as long as wide (Fig. 82); segments 2–4 of gaster visible in lateral view *lacerta* sp. n. (p. 266)
- Antenna filiform, blackish; scutellar disc punctate-reticulate; radial cell $3 \times$ as long as wide (Fig. 84) *lana* sp. n. (p. 267)
- 8 Notaulices not converging sharply towards juncture with scutellum (Fig. 86) 9
- Notaulices converging sharply towards juncture with scutellum (Fig. 85) 10
- 9 Antenna clavate; scutellar cup not extending to apex of scutellar disc (Fig. 85) *nitida* Benoit (p. 269)
- Antenna filiform; scutellar cup extending to apex of scutellar disc (Fig. 86) *leptis* sp. n. (p. 267)
- 10 Antenna filiform, clearly longer than head-apex of gaster, segments 5–13 each progressively shorter than the preceding one, of equal width, two apical segments of equal length (Fig. 87), all much longer than broad; radial cell of forewing elongate, *Rs+M* and *M* of forewing indicated, not pigmented; scutellar disc punctate-reticulate-rugose, visible viewed dorsally on lateral and apical margins (*cf.* Fig. 114); side margins of pronotum weakly sculptured with long scattered hairs, distance between notaulices at juncture with scutellum as wide as a notaulix (*cf.* Fig. 114); segment 3 of gaster not visible in lateral view *conversa* sp. n. (p. 264)
- Antenna subclavate, at most slightly longer than head-apex of gaster; segments 6–12 each shorter than its preceding segment but each broader, apical segments weakly expanded to give a weak clavate appearance (Fig. 88); radial cell of forewing (Fig. 140), *Rs+M* and *M* not indicated; scutellar disc punctate-reticulate, visible on lateral and apical margins (Fig. 139); pronotum either side of pronotal plate aciculate (*cf.* Fig. 83); segment 3 of gaster visible in lateral view (*cf.* Fig. 77)..... *parma* sp. n. (p. 270)
- 11 Antennal segments 3 and 4 subequal in length, never with segment 4 longer than 3 (Fig. 89); scutellar cup elongate or oval 12
- Antennal segments 3 and 4 not subequal, either clearly longer or shorter than each other (Figs 105, 120); scutellar cup elongate..... 18

- 12 Antennal segment 4 at most $1.2 \times$ length of 5, antenna subclavate (Figs 89, 90); radial cell of forewing elongate, at least $2 \times$ as long as wide (Fig. 112), $Rs+M$ and M indicated, base of wing fumate or yellowish; scutellar cup elongate; gaster not conspicuously compressed laterally 13
- Antennal segments 4 and 5 subequal in length (Fig. 142), antenna filiform or subclavate; radial cell of forewing variable in length to width ratio, $Rs+M$ and M present or absent, base of forewing rarely fumate; scutellar disc sculpture variable, from rugose-punctate to punctate-reticulate, scutellar cup elongate or oval; notaulices converging towards scutellum, sometimes sharply; gaster sometimes strongly laterally compressed 14
- 13 Notaulices converging gently towards scutellum (Fig. 92), scutellar disc punctate-reticulate, visible laterally and apically, scutellar cup narrow (Fig. 92); antenna yellowish basally, brownish apically, subclavate (Fig. 89) **fetura** sp. n. (p. 265)
- Notaulices sharply converging towards scutellum (Fig. 93); scutellar disc strigose, scutellar cup obscuring apical surface of disc (Figs 93, 141); antenna bright yellow.
Radial cell of forewing appearing open on anterior margin due to very weak pigmentation **pallida** sp. n. (p. 269)
- 14 Gaster very strongly compressed laterally, tergites 3 and 4 visible in lateral view (dorsally they appear knife-edged and acutely angled to tergite 2) (Fig. 94).
Scutellar cup large, oval (Fig. 102) 15
- Gaster not conspicuously compressed laterally, swollen medially, tergites 3 and 4 not clearly visible in lateral view (Fig. 100) 16
- 15 Gastral segments, viewed laterally, impunctate (Fig. 94); antennal segments 3–6 subequal in length, apical antennal segments weakly swollen medially (Fig. 91), rhinaria present on segments 7–13 **compressa** sp. n. (p. 263)
- Gastral segment 3 finely but densely punctate (Fig. 100); antenna subclavate, segment 5 very slightly shorter than 4, 4–13 each progressively broader than preceding segment to form a clavate antenna (Fig. 98), rhinaria present on segments 5–13 **urundiensis** Benoit (p. 272)
- 16 Radial cell of forewing long, narrow (Fig. 95), $3.6 \times$ as long as wide; antennal segments 3–8 subequal in length; notaulices converging gently towards scutellum; scutellar cup oval, disc coriaceous, visible laterally.
Tergite 2 of gaster only visible in lateral view, bright orange-yellow .. **perangusta** sp. n. (p. 270)
- Radial cell of forewing at most $3 \times$ as long as wide; antennal segments 3–6 subequal in length; notaulices converging sharply or gently towards scutellum, scutellar cup variable in shape 17
- 17 Notaulices converging sharply towards scutellum; scutellar cup oval, scutellar disc visible on lateral margins only, viewed dorsally (Fig. 97); antenna subclavate, as long as head-apex of gaster (Fig. 103); tergites 2–4 of gaster visible in lateral view, hypopygium pronounced (cf. Fig. 77) **bucca** sp. n. (p. 263)
- Notaulices converging gently towards scutellum; scutellar cup elongate, scutellar disc visible laterally and apically in dorsal view (Fig. 104); antenna filiform, longer than head-apex of gaster (Fig. 113); tergite 4 of gaster not visible, ovipositor extended (cf. Fig. 94) **advena** sp. n. (p. 262)
- 18 Antenna clavate, segment 3 clearly longer than 4 (Fig. 120) 19
- Antenna filiform, segment 3 clearly shorter than 4 (Fig. 105).
Scutellar disc punctate, visible laterally and apically, scutellar cup elongate (cf. Fig. 132); notaulices converging gradually towards scutellum; radial cell of forewing short, broad (cf. Fig. 80) **dubia** sp. n. (p. 264)
- 19 Notaulices converging sharply towards scutellum (cf. Fig. 114); scutellar cup elongate, narrow, scutellar disc visible laterally and apically; radial cell of forewing lightly pigmented (Fig. 111) **furcula** sp. n. (p. 266)
- Notaulices widely separated at juncture with scutellum (Fig. 132); scutellar cup large, oval, scutellar disc only visible viewed dorsally on lateral margins, radial cell of forewing heavily pigmented (cf. Fig. 130) **mauri** sp. n. (p. 268)

Males

- 1 Apical margins of tergite 3 (4 when visible) of gaster with fine dense punctures (Fig. 106) 2
- Apical margins of tergite 3 without dense punctures 6
- 2 Segments 2–6 of gaster clearly visible in lateral view (Fig. 106); legs bright orange-yellow;

- segment 3 of antenna curved, expanded apically, antenna black except for basal three segments brownish *trulla* sp. n. (p. 271)
- Segment 6 of gaster not visible in lateral view; legs never bright orange-yellow; segment 3 of antenna curved, sometimes expanded apically..... 3
- 3 Radial cell of forewing at most $2.5 \times$ as long as broad (Fig. 135); antenna yellowish, segment 3 less than $1.2 \times$ as long as segment 4 (Fig. 109), weakly curved..... 4
- Radial cell of forewing $3 \times$ as long as broad (Fig. 130); antenna brownish black, segment 3 strongly curved, swollen apically (Fig. 110)..... 5
- 4 *Rs+M* and *M* of forewing clearly pigmented, base of wing infusate or weakly fumate, radial cell $3 \times$ as long as broad; pronotum either side of pronotal plate weakly sculptured; segment 3 of antenna strongly curved, weakly swollen apically (Fig. 108); notaulices sharply converging towards scutellum (cf. Fig. 114)..... *conversa* sp. n. (p. 263)
- *Rs+M* and *M* of forewing not pigmented, base of wing sometimes infusate, radial cell $4 \times$ as long as broad; pronotum either side of pronotal plate smooth; segment 3 of antenna curved, strongly swollen apically (Fig. 115); notaulices converging gently towards scutellum (Fig. 85) *nitida* Benoit (p. 269)
- 5 Segment 3 of antenna at most $1.2 \times$ length of 4, weakly curved (Fig. 109); wings weakly fuscous basally *lana* sp. n. (p. 267)
- Segment 3 of antenna $1.6 \times$ length of 4, strongly curved, swollen apically (Fig. 110); wings hyaline *marcellus* sp. n. (p. 268)
- 6 Segment 3 of antenna $1.5 \times$ length of 4, weakly curved on outer margins, swollen distally (Fig. 107), 4–10 each decreasing in length (each segment shorter than preceding one), 11–13 subequal, shorter than 10, all segments black; forewing with vein R_1 thinner and less strongly pigmented than R_{s1} or R_{s2} , *Rs+M* and *M* not indicated, forewing not infusate basally (Fig. 111); scutellar disc reticulate-rugose, scutellar cup elongate (longer than wide), not extending to apex of disc (Fig. 114); sides of pronotum not sculptured *furcula* sp. n. (p. 266)
- Segment 3 of antenna at most $1.2 \times$ length of 4, weakly curved on outer margin, sometimes swollen distally (Fig. 143), 4–5 subequal, 6–8 subequal, each shorter than 5, 9–10 subequal, each shorter than 8, 11–14 shorter than 8, each progressively shorter than the preceding segment, basal segments brownish yellow, apical segments darker; forewing with veins R_1 , R_{s1} and R_{s2} of equal thickness, base of wing sometimes infusate; side margins of pronotum with or without sculpture; scutellar disc either punctate-reticulate or rugose, scutellar cup either as wide as long or longer than wide 7
- 7 Notaulices converging gradually towards scutellum (Fig. 92); scutellar cup elongate, narrow, scutellar disc punctate-reticulate, visible in lateral and apical view; side margins of pronotum with canaliculate sculpture; wings with conspicuous fuscous or smoky base (Fig. 112) (difficult to separate from *advena*) *fetura* sp. n. (p. 265)
- Notaulices converging sharply at a point two-thirds of way towards scutellum (cf. Fig. 114); scutellar cup elongate or oval, lateral margins only of scutellar disc visible in dorsal view, apex of disc obscured by cup (cf. Fig. 114); side margins of pronotum without sculpture; wing not fumate basally 8
- 8 Radial cell of forewing at least $3 \times$ as long as wide; scutellar cup almost as wide as long, truncated apically (cf. Fig. 114), scutellar disc rugose; pronotum with scattered pubescence on lateral margins; tergites 1–4 visible in lateral view *perangusta* sp. n. (p. 270)
- Radial cell of forewing at most $2 \times$ as long as wide (Fig. 95); scutellar cup longer than wide, oval, rounded apically (Fig. 104); scutellar disc punctate-reticulate; pronotum sculptured on lateral margins..... *advena* (p. 262); *bucca*-group; *compressa*-group

Eucoilidea advena sp. n.

(Figs 94, 101, 112, 113)

DESCRIPTION. ♀. Antenna 13-segmented, filiform, segments 3–5 subequal, 6–10 each progressively shorter than preceding segment (Fig. 113). Head, viewed frontally, smooth, shining, frontal line not pronounced, malar space with epistomal suture, mandibles bidentate, cheeks converging sharply, eyes further apart measured medially than height of an eye. Pronotal plate not conspicuous, lateral foveae not enclosed, i.e. open (cf. Fig. 101); mesoscutum with distinct notaulices, converging gently on approach to scutellum but not merging, scutellar disc rugose-reticulate, visible laterally and posteriorly, scutellar cup longer than

broad, apical half with a large fovea (Fig. 104), scutellar foveae deep, lateral bars of scutellum broad and polished; propodeum with parallel carinae, mesopleura smooth, shining, with a distinct suture. Segment 1 of gaster short, crenulate, as wide as long, segment 2 the largest, occupying most of visible area in lateral view, segment 3 partially visible in lateral view, gaster impunctate, hypopygium with long basal setae, ovipositor sheath long (cf. Fig. 94). Legs yellowish orange, tibiae with two apical spurs, claws simple. Wings pubescent on surface, with apical fringe of hairs, radial cell of forewing closed on wing margin, elongate, *Rs+M* and *M* indicated, pigmented basally, base of wing with a smoky appearance (cf. Fig. 112). Colour: antenna yellow basally, apical segments dark, head and thorax black, gaster chestnut-brown-black, legs yellowish orange.

♂. Antenna 15-segmented, filiform, segment 3 the largest, weakly curved on inner margin, twisted and excavate medially on outer margin (included by association).

MATERIAL EXAMINED

Holotype ♀, **Zaire**: Rutshuru (riv. Kanzarue), 1200 m, 16.vii.1935 (*G. F. de Witte*) (MRAC).

Paratypes. **Cameroun**: 4 ♀ (BMNH). **Kenya**: 5 ♂ (BMNH). **Rhodesia**: 2 ♀, 2 ♂ (BMNH). **South Africa**: 5 ♀, 4 ♂ (BMNH). **Southern Yemen**: 1 ♀ (BMNH). **Uganda**: 2 ♀, 5 ♂ (BMNH), 1 ♂ (ZMC). **Zaire**: 198 ♀, 35 ♂ (MRAC). **Zambia**: 1 ♀, 2 ♂ (BMNH). **Zimbabwe**: 1 ♀ (BMNH).

REMARKS. This species is closely related to *bucca* but is distinguished by the length of the scutellar cup, the shape of the pronotal plate and the convergence of the notaulices.

Eucoilidea bucca sp. n.

(Figs 97, 103)

DESCRIPTION. ♀. Antenna 13-segmented, subclavate, segments 3–6 subequal in length, 9–11 equal in length (Fig. 103). Face, viewed frontally, smooth, polished, malar space with epistomal suture, eyes further apart, measured medially, than height of an eye. Pronotum either side of pronotal plate weakly aciculate. Mesoscutum smooth, polished, notaulices distinct, converging sharply towards scutellum two-thirds of way from posterior (Fig. 97); scutellar fovea deep, smooth, shining, scutellar cup large, with a large central fovea, the periphery with a ring of smaller fovea; scutellar disc reticulate-rugose with long hairs on its apex; carinae of propodeum diverging at base, either side of carinae with sparse hairs, medial area with scattered hairs; mesopleural suture distinct, surface smooth, polished. Segment 1 of gaster short, wider than long, strongly crenulate, tergite 2 the largest in lateral view, tergites 3 and 4 partially visible, hypopygium viewed laterally, broad, ventral surface with long hairs, ventral spine as long as hypopygium, legs orange-yellow, hind metatarsus as long as tarsal segments 2–4 combined, tibia with two apical spurs, tarsal claws simple. Wings pubescent on surface, apical margins with a hair fringe, radial cell of forewing closed on margin, 2 × as long as broad, *Rs+M* and *M* weakly indicated, base of wing with a smoky hue. Colour: antenna with basal segments yellowish, apical segments blackish, head and thorax black, gaster dark chestnut-red, legs yellowish.

♂. Antenna 15-segmented (included by association).

MATERIAL EXAMINED

Holotype ♀, **Zaire**: St Edouard, Kamanda, 8.iv.1936 (*L. Lippens*) (MRAC).

Paratypes. **Ethiopia**: 1 ♂ (BMNH). **Kenya**: 8 ♀ (BMNH). **South Africa**: 3 ♀ (BMNH). **Uganda**: 2 ♀ (BMNH). **Yemen**: 1 ♀ (BMNH). **Zaire**: 121 ♀, 7 ♂ (MRAC). **Zambia**: 1 ♂ (BMNH).

HOST DATA. 1 ♀ from South Africa is labelled ex *Munroella myiopitina* Bezzi (Trypetidae).

REMARKS. Superficially very similar to *advena* but differing in the shape of the pronotal plate.

Eucoilidea compressa sp. n.

(Figs 91, 94, 97, 121, 128)

DESCRIPTION. ♀. 13-segmented, filiform, segments 3–6 subequal, 7–13 with rhinaria, weakly swollen medially (Fig. 91). Face, viewed frontally, smooth, polished, with dense pubescence either side of frontal area, eyes weakly converging towards clypeus, eyes further apart than height of an eye measured medially. Pronotal plate very weakly produced forward, anterior and posterior parts fused medially by a bridge, fovea on either side open (cf. Fig. 128); pronotum either side of pronotal plate with scattered setae. Mesoscutum smooth, polished, notaulices distinct, converging sharply towards scutellum at a point two-thirds of way towards scutellum but not meeting at juncture; lateral bars of scutellum smooth, polished, scutellar fovea smooth, polished, shallow, scutellar disc reticulate-rugose, rounded apically,

visible on lateral margins, scutellar cup large, broad, extending almost to apex of disc, rim of cup lighter than central area which has large fovea, outer margins of cup with small pits or fovea on lower half adjacent to rim (*cf.* Fig. 97). Mesopleural suture distinct, surface smooth, polished, metapleura with a dense tuft of pubescence on anteroventral margin; propodeal carinae weakly bowed medially, obscured by dense pubescence. Segment 1 of gaster short, as wide as long, crenulate, tergites 1–4 visible in lateral view (Fig. 94), tergite 2 the largest with a few sparse hairs on lateral margins at base, 2–4 impunctate, lenticular in shape, hypopygium not pronounced, ovipositor short. Legs orange, coxa elongate, swollen basally, trochanters elongate, femur and tibia normal, hind metatarsus as long as tarsal segments 2–4 combined. Wing surface pubescent, apical fringe of hairs short, radial cell of forewing closed on wing margin, twice as long as wide measured medially (Fig. 121). *Rs+M* and *M* indicated, weakly pigmented. Colour: antenna orange-yellow, head and thorax black, gaster orange-yellow.

♂. Antenna 15-segmented, 3rd segment curved, swollen distally (included by association).

MATERIAL EXAMINED

Holotype ♀, **Zaire**: P. N. U. Lusifiga (1700 m, 11–18.vii.1947 (*Mis. G. F. de Witte*) (MRAC).

Paratypes. **Kenya**: 4 ♀, 3 ♂ (BMNH). **South Africa**: 3 ♀ (BMNH). **Uganda**: 1 ♂ (BMNH). **Zaire**: 35 ♀ (MRAC). **Zimbabwe**: 4 ♀ (BMNH).

REMARKS. This species is closely related to *urundiensis* but is distinguished by the shape of the antenna.

Eucoilidea conversa sp. n.

(Figs 85, 87, 108)

DESCRIPTION. ♀. Antenna 13-segmented, almost filiform, segment 3 longer than 4, all flagellar segments at least twice as long as wide, segments 5–13 each progressively shorter than preceding segment, all longer than segment 4 (Fig. 87), all segments of equal width. Face, viewed frontally, smooth, shining; notaulices distinct, converging sharply towards scutellum two-thirds of distance from it, scutellar foveae smooth, polished, deep, scutellar disc reticulate-rugose with long scattered hairs not obscured by scutellar cup, scutellar cup elongate, longer than broad, with small pits or fovea around rim of cup, medial area with a large fovea (*cf.* Fig. 85); carinae of propodeum indistinct, sculptured medially. Mesopleura smooth, polished, suture complete. Segment 1 of gaster wider than long, crenulate, segment 2 the largest in lateral view, apical half with dense punctures, remaining segments not visible, hypopygium short, not generally visible. Legs orange-yellow, metatarsus as long as tarsal segments 2–4 combined, tibia with two apical spurs, tarsal claws simple. Wings pubescent on surface, apical hair fringe distinct, radial cell of forewing closed on wing margin, veins *Rs+M* and *M* indicated, not pigmented, radial cell almost 3 × as long as broad, *2rm* as broad as long. Colour: antenna yellowish basally, brownish apically (entirely yellow in Mauritian specimen), head and thorax blackish, gaster chestnut-brown, legs yellow.

♂. Antenna 15-segmented, filiform, segment 3 curved, longer than 4 (Fig. 108).

MATERIAL EXAMINED

Holotype ♀, **Zaire**: 3.i.1952 (*H. de Saeger*) (MRAC).

Paratypes. **Cameroun**: 1 ♂ (BMNH). **Gold Coast**: 20 ♀, 3 ♂ (BMNH). **Kenya**: 6 ♀, 4 ♂ (BMNH); 1 ♀ (ZMC). **Madagascar**: 8 ♀, 3 ♂ (BMNH); 10 ♀, 6 ♂ (MRAC); 1 ♂ (MNHN). **Mauritius**: 1 ♀, 1 ♂ (BMNH). **Nigeria**: 7 ♀, 10 ♂ (BMNH). **South Africa**: 3 ♀, 1 ♂ (BMNH). **Tanzania**: 1 ♀ (BMNH). **Uganda**: 20 ♀ (BMNH). **Zimbabwe**: 5 ♀, 2 ♂ (BMNH).

REMARKS. This species is similar to *parma* but the antennae have an overall filiform appearance; it is also very close to *nitida* but is distinguished by the shape of the antenna and the notaulices.

Eucoilidea dubia sp. n.

(Fig. 116)

DESCRIPTION. ♀. Antenna 13-segmented, filiform, 5 shorter than 4, 4 and 5 subequal in length, 6 and 7 subequal, each shorter than 5, 8 shorter than 7, 9 and 10 each shorter than 8, subequal in length, 11 shorter than 10, 12 shorter than 11, 13 longer than 12. Head, viewed frontally, smooth, polished, malar space with a distinct ridge with scattered setae either side of supraclypeal area, mandibles dentate, eyes measured medially as far apart as height of an eye. Pronotum weakly pubescent, aciculate either side of pronotal plate. Pronotal plate small, not protruding. Mesoscutum smooth, polished, notaulices distinct, converging apically, but not meeting, scutellar fovea deep, lateral bars of scutellum smooth, polished, scutellar cup elliptical, longer than wide, not extending to apex of disc, scutellar disc reticulate-rugose with apical fringe

of long hairs; propodeal carinae parallel. Segment 1 of gaster as wide as long, short, crenulate, segment 2 of gaster the largest in lateral view, smooth, impunctate, other segments not visible in lateral or dorsal view, hypopygium not projecting, with long hairs on ventral surface, ovipositor usually projecting, gaster as in Fig. 116. Legs yellowish orange, tibiae with two apical spurs, tarsal claws simple. Wing surface pubescent, apical margins with a hair fringe, radial cell of forewing closed, longer than broad, $Rs+M$ and M indicated, base of wing pigmented. Colour: antenna orange-yellow basally, apical segments brownish, head and thorax black, gaster reddish basally, blackish apically.

♂ unknown.

MATERIAL EXAMINED

Holotype ♀, **South Africa**: E. Cape Province, Katberg, 4,000 ft (1,220 m), xii.1932 (*R. E. Turner*) (BMNH).

Paratypes. **South Africa**: 8 ♀ (BMNH). **Zaire**: 17 ♀ (MRAC).

REMARKS. This species is related to *mauri* but differs in the form of antennae and the notaulices.

Eucoilidea extraria sp. n.

(Figs 76, 77, 97, 123, 128)

DESCRIPTION. ♀. Antenna 14-segmented, subclavate, 8–14 forming a weak club, segments 3–8 subequal in length, 9–11 subequal, shorter than preceding segments, 12 and 13 each shorter than segment 11, apical segment as long as segment 3 (Fig. 76). Head, viewed frontally, smooth, polished, frontal area raised, malar space with a distinct carina, mandibles tridentate, eyes diverging at top and bottom. Pronotal plate weakly protruding, pronotum either side of plate smooth, weakly pubescent, pronotal plate fovea elongate, open on lateral margins (*cf.* Fig. 128). Mesoscutum smooth, shining, with weak crenulate sculpture on margins, juncture with pronotum crimped, notaulices distinct, sharply converging at a point two-thirds from pronotum (in outline similar to a wine glass) (*cf.* Fig. 97); scutellar disc punctate-reticulate, scutellar cup very large, almost as wide as long, with a large central fovea, the rim of cup with a ring of smaller fovea, scutellar disc viewed dorsally, visible only on lateral margins. Mesopleura smooth, shining, with a distinct suture; propodeal carina diverging basally. Segment 1 of gaster viewed dorsally, wider than long, strongly crenulate (*cf.* Fig. 77), segment 2, viewed laterally, the largest, apical quarter with widely scattered punctures, segment 3 partially visible, remaining segments not visible, hypopygium distinct, ovipositor as long as visible part of hypopygium. Legs orange-yellow, tibiae with two apical spurs, claws simple. Wing surface pubescent, apical margins with a fringe of hairs, radial cell of forewing closed, longer than broad, $Rs+M$ and M weakly indicated (Fig. 123). Colour: antenna dark orange-yellow except apical segments dark brown, head and thorax black, gaster dark chestnut-red-black.

♂ unknown.

MATERIAL EXAMINED

Holotype ♀, **Madagascar**: La Mandrake, ii.1944 (*A. Seyrig*) (MRAC).

Paratype. 1 ♀, same data as holotype (MRAC).

REMARKS. This species is easily distinguished by the extra segment in the antenna, the very large scutellar cup and the almost completely orange antenna.

Eucoilidea fetura sp. n.

(Figs 89, 92, 112, 117, 118)

DESCRIPTION. ♀. Antenna 13-segmented, segments 3 and 4 equal in length, 5–12 each shorter than 4, overall shape filiform (Fig. 89). Head, viewed frontally, smooth, shining, face with scattered hairs, mandibles tridentate, eyes further apart at top of eyes than medially (*cf.* Fig. 117), malar suture distinct. Pronotal plate not protruding, with elongate fovea on either side of medial bridge (*cf.* Fig. 128). Pronotum with sparse pubescence either side of plate; mesoscutum smooth, polished, notaulices distinct, converging in apical third towards scutellum, lateral bars of scutellum smooth, scutellar fovea large, scutellar cup elliptical with a large fovea basally, scutellar disc punctate-reticulate, disc visible laterally and apically (Fig. 92), apex of disc with a fringe of long hairs; mesopleural suture distinct; propodeum sculptured, carinae indistinct. Segment 1 of gaster short, as broad as long, crenulate, segment 2 the largest, occupying most of visible area in lateral view, segment 3 partially visible, gaster impunctate, hypopygium short with sparse hairs ventrally, ovipositor protruding (Fig. 118). Legs yellowish orange, tibiae with two apical spurs, claws simple. Wings pubescent, margins of wings with a hair fringe, radial cell of forewing closed on wing margin,

longer than wide, $Rs+M$ and M indicated, base of wings infusate (Fig. 112). Colour: antenna yellow basally, with apical four segments blackish, head and thorax black, gaster blackish, chestnut-red basally.

♂. Antenna 15-segmented, filiform, segment 3 curved, weakly swollen apically.

MATERIAL EXAMINED

Holotype ♀, **Zimbabwe**: Salisbury, Chishawasha, ii.1979 (*A. Watsham*) (BMNH).

Paratypes. **Cameroun**: 4 ♀ (BMNH). **Nigeria**: 2 ♀ (BMNH). **South Africa**: 6 ♀, 4 ♂ (BMNH). **Senegal**: 1 ♀ (BMNH). **Uganda**: 4 ♀, 1 ♂ (BMNH); 1 ♀ (ZMC). **Zaire**: 26 ♀, 38 ♂ (MRAC).

REMARKS. This species is easily confused with *advena* but in the female the overall shape and the ratios of the antennal segments distinguish it. In both sexes the apex of the wings tends to be smoky.

Eucoilidea furcula sp. n.

(Figs 85, 107, 111, 119, 120)

DESCRIPTION. ♀. Antenna 13-segmented, clavate, segment 3 longer than 4, 4–10 subequal in length, 11–12 subequal, each shorter than 10 (Fig. 120). Head, viewed frontally, smooth, polished, with scattered hairs either side of supraclypeal area, mandibles tridentate, eyes as far apart as the height of an eye measured medially, malar suture distinct. Pronotal plate not protruding, with lateral fovea open; pronotum weakly pubescent either side of pronotal plate; mesoscutum smooth, polished, notaulices distinct, converging sharply on nearing scutellum, not confluent, scutellar foveae large, shallow, lateral bars smooth, scutellar cup large with apical depression, longer than broad measured medially, scutellar disc reticulate-rugose, visible laterally and apically, viewed dorsally (*cf.* Fig. 85), apex of disc with a fringe of long hairs; mesopleural suture distinct, metapleura weakly ridged, anteroventral cavity with a tuft of hairs; propodeal carinae close, parallel, medially with canaliculate sculpture. Segment 1 of gaster short, as broad as long, crenulate, sometimes obscured by tergite 2. Segment 2 the largest in lateral view, with two or three hairs present basally on lateral margins, gaster impunctate, remaining segments of gaster not visible, hypopygium not pronounced, with sparse hairs present on ventral surface, ovipositor protruding, gaster (Fig. 119). Legs yellowish orange, tibiae with two apical spines, claws simple. Wing surface pubescent, apical margins with a hair fringe, radial cell of forewing closed, lightly pigmented, as broad as long measured medially, $Rs+M$ and M not indicated (Fig. 111), base of wing weakly infusate. Colour: antenna pale brownish yellow, head and thorax black, gaster dark chestnut-brown.

♂. Antenna 15-segmented, segment 3 $1.5 \times$ length of 4 (Fig. 107).

MATERIAL EXAMINED

Holotype ♀, **South Africa**: Witzenberg Vall, SW. Cape Province, 3,000 ft [915 m], 19.i.1921 (*R. E. Turner*) (BMNH).

Paratypes. **Ethiopia**: 1 ♀, 1 ♂ (BMNH). **Kenya**: 2 ♀, 1 ♂ (BMNH); 1 ♀ (ZMC). **South Africa**: 50 ♀, 15 ♂ (BMNH). **Uganda**: 6 ♀, 4 ♂ (BMNH). **Zaire**: 1 ♀ (MRAC). **Zimbabwe**: 6 ♀, 1 ♂ (BMNH).

REMARKS. This species is distinguished from others by the shortish clavate antenna, the third segment being distinctly longer than the fourth. It is separated from *mauri*, a closely related species, by the form of the notaulices and the shape of the scutellar cup.

Eucoilidea lacerta sp. n.

(Figs 81, 82, 85, 117)

DESCRIPTION. ♀. Antenna 13-segmented, very weakly club-shaped, segment 3 shorter than 4 (Fig. 81), 5–13 each progressively shorter than the preceding segment, all with rhinaria. Face smooth, shining, with sparse scattered pubescence, eyes further apart measured at top of eye than at bottom, malar suture distinct (Fig. 117). Pronotal plate not sharply protruding, pronotum either side of pronotal plate with long scattered hairs, surface aciculate. Mesoscutum smooth, polished, notaulices distinct, converging towards scutellar suture, anterior parallel lines weakly indicated; lateral bars of scutellum polished, scutellar foveae shallow, polished, scutellar cup long, wide, extending almost to apex of scutellar disc, apical half with a large depression, rim with a border of smaller pits along edge of lower margins, scutellar disc rugose-reticulate, apex with a fringe of long hairs, apical margin obscured by scutellar cup (*cf.* Fig. 85). Mesopleura smooth, polished, suture distinct; propodeum with pronounced parallel carinae. Segment 1 of gaster short, as broad as long, crenulate, segment 2 the largest viewed laterally, punctate on apical margins, segment 3 partially visible, hypopygium short, ovipositor not protruding. Legs yellowish orange, with scattered setae, tarsal claws simple. Wing surface pubescent, with apical fringe of hairs, radial cell of

forewing closed on margin, elongate, $Rs+M$ and M indicated (Fig. 82). Colour: antenna yellow basally, 6–12 dark, head, thorax and first segment of gaster black, second segment of gaster chestnut-brown at base, becoming black towards apex.

♂ unknown.

MATERIAL EXAMINED

Holotype ♀, **Ivory Coast**: Pakobo, 44 km N. Tlassale, x.1962 (*J. Decelle*) (MRAC).

Paratypes. **Ivory Coast**: 45 ♀, same data as holotype. **Zaire**: 4 ♀ (MRAC).

REMARKS. The females of this species and *marcellus* are distinguished by the 4th segment of the antenna being clearly longer than the 3rd.

Eucoilidea lana sp. n.

(Figs 86, 109, 124, 125, 126)

DESCRIPTION. ♀. Antenna 13-segmented, filiform, segment 4 longer than 3, 7–13 each progressively shorter than preceding segment, all of equal width, rhinaria present on segments 4–13 (Fig. 124). Face, viewed frontally, smooth, shining, malar space with a distinct epistomal suture, eyes diverging at top and bottom. Pronotal plate not projected forward, foveae large, open on lateral margins of medial bridge (Fig. 125). Pronotum either side of pronotal plate strongly aciculate (Fig. 125). Mesoscutum smooth, polished, notaulices distinct, converging sharply towards scutellum two-thirds from it but not confluent (Fig. 114), scutellar fovea deep, lateral bars polished, scutellar disc punctate-reticulate, with long scattered hairs on apical margin, scutellar disc visible on lateral margins, viewed dorsally, apex obscured by large scutellar cup, cup with a large apical depression, the rim with small pits along edge (*cf.* Fig. 86); carinae of propodeum weakly bowed medially, pubescent on either side. Mesopleura with a distinct suture. Segment 1 of gaster short, as broad as long, crenulate, segment 2 the largest in lateral view, with dense punctures on apical margins, other segments not visible. Legs brownish yellow, metatarsus as long as tarsal segments 2–4 combined, tibiae with 2 apical spurs, tarsal claws simple, wing surface pubescent, apical margins with a hair fringe, radial cell of forewing closed on margin, $2 \times$ as long as wide, $Rs+M$ and M weakly indicated. Colour: antenna blackish, head and thorax black, gaster chestnut-red.

♂. Antenna 15-segmented, filiform, segment 3 the largest, strongly curved, swollen apically (Figs 109, 126).

MATERIAL EXAMINED

Holotype ♀, **Zaire**: Kivu, Nyyongera (near Rutshuru), Batumba, 1218 m, 17.vii.1935 (MRAC).

Paratypes. **Zaire**: 4 ♀ (MRAC).

REMARKS. This species is very close to *lacerta* but differs from it on the antennal shape and the sculpture of the scutellar disc. The male is similar to *marcellus* but differs by the length of the antennal segments.

Eucoilidea leptis sp. n.

(Figs 86, 127, 128)

DESCRIPTION. ♀. Antenna 13-segmented, filiform, without trace of a distinct club, segments 3–13 with rhinaria, segment 3 longer than 4, 5–7 subequal, each slightly shorter than 4, 8–13 each shorter than 5, segment 3 distinctly curved, swollen apically (Fig. 127). Head, viewed frontally, with eyes further apart measured medially than height of an eye, face with long scattered setae, malar space with a distinct epistomal suture, mandibles tridentate. Pronotum either side of pronotal plate sculptured, pronotal plate not projected forward, fovea either side of medial bridge open laterally (Fig. 128). Mesoscutum smooth, polished, notaulices distinct, weakly converging on approach to scutellum, further apart at juncture with scutellum than width of a notauli (Fig. 86); scutellar foveae broader than long, lateral bars polished, scutellar disc visible on lateral margins, reticulate-rugose, apex of disc with long setae, scutellar cup longer than broad, obscuring apex of disc, cup with a large apical depression or fovea, rim of cup with a circle of minute fovea or pits; carinae of propodeum parallel, densely pubescent on outer margins. Mesopleura with a distinct suture, anteroventral cavity of metapleura with a few hairs. Segment 1 of gaster short, wider than long, crenulate, segment 2 the largest in lateral view, apical half densely punctate, segments 3 and 4 partially visible, punctate, hypopygium short, setae present on margins. Legs slender, coxae, femora and tibiae brownish, tarsi yellow, coxae short, swollen, femora swollen on basal half, metatarsus as long as tarsal segments 2–4 combined, tibiae with two apical spines, tarsal claws simple. Wings densely pubescent, apical margins with a hair fringe, radial cell of forewing closed on margin, $3 \times$ as long as broad measured

medially, vein *2rm* almost square. Colour: antenna dark brownish black, head and thorax black, gaster black except for brownish apex.

♂ unknown.

MATERIAL EXAMINED

Holotype ♀, **Cameroun**: Nkoemvon, viii–xi.1980 (*D. Jackson*) (BMNH).

REMARKS. Distinguished from *nitida* by the antennal ratios and the scutellar cup.

Eucoilidea marcellus sp. n.

(Figs 78, 110, 129, 130)

Description. ♀. Antenna 13-segmented, filiform, segment 3 $1.2 \times$ as long as 4, 5–12 each progressively decreasing in length (Fig. 129), 4–13 with rhinaria. Face viewed frontally, smooth, shining, with scattered pubescence, malar space with a distinct suture, mandibles tridentate, maxillary palp 4-segmented, labial palp 2-segmented, eyes elongate, oval, further apart than height of an eye measured medially; pronotal plate not protruding, viewed fronto-dorsally minute, with lateral fovea open either side of medial bridge, pronotum either side of pronotal plate densely pubescent. Mesoscutum smooth, polished, notaulices distinct, converging towards scutellum at a point two-thirds of way towards scutellar suture, not confluent at juncture with scutellum; lateral bars of scutellum polished, scutellar fovea large, deep, scutellar cup large, extending to apex of scutellar disc, convex basally, with a large fovea on apical half with a ring of smaller punctures or fovea around rim of cup, scutellar disc reticulate-rugose, with long setae on apical margins. Propodeal carinae subparallel, converging basally. Mesopleura smooth, polished, carinae complete, metapleura with two ridges, anteroventral cavity with a few hairs, ventral margin of mesopleuron pubescent. Segment 1 of gaster canaliculate, as broad as long, viewed laterally, crescent-shaped (partially obscured by tergite 2), tergite 2 of gaster the largest in lateral view, with a few sparse hairs at base on lateral margins, apical half densely punctate, remaining segments not visible, hypopygium small, ventral spine long. Legs short, robust, yellow, fore and mid coxae with long hair fringe, femora swollen medially, tibiae and tarsi densely pubescent, tarsal claws simple. Wings pubescent on surface, with apical fringe of hairs, radial cell of forewing closed on anterior margin, veins *Rs+M* and *M* distinct, weakly pigmented, radial cell of forewing elongate, $2.6 \times$ as long as broad (Figs 78, 130). Colour: antenna brownish black, head and thorax black, gaster dark brown-black, legs yellowish.

♂. Antenna 15-segmented, filiform, segment 3 the largest, strongly curved, swollen apically (Fig. 110).

MATERIAL EXAMINED

Holotype ♀, **Madagascar**: Tan, Perinet, 27.iv–3.v.1983 (*J. S. Noyes & M. C. Day*) (BMNH).

Paratypes. **Madagascar**: 4 ♀, 4 ♂, same data as holotype. **Mauritius**: 3 ♂ (BMNH). **Zaire**: 1 ♀ (MRAC).

REMARKS. This species is separated from *tyrus* by the shape of the scutellum and the radial cell of the forewing (see key).

Eucoilidea mauri sp. n.

(Figs 131, 132)

Description. ♀. Antenna 13-segmented, clavate, segment 3 $1.2 \times$ length of 4, 5–12 each gradually decreasing in length, 13 longer than 12, 5–13 with rhinaria forming a weak club (Fig. 131). Head, viewed frontally, smooth, shining, with sparse pubescence, long setae on anterior tentorial pit, eyes weakly converging, as far apart as height of an eye measured medially, malar suture distinct. Pronotal plate not projected forward, lateral fovea either side of medial bridge open; mesoscutum smooth, polished, notaulices weakly converging towards scutellum, widely spaced at juncture with scutellar suture (Fig. 132); lateral bars of scutellum polished, scutellar foveae large, smooth, shallow, scutellar cup large, oval, with a large medial fovea or depression, scutellar disc viewed dorsally, visible on lateral margins only, reticulate-rugose. Mesopleura smooth, polished, suture distinct, metapleura polished, weakly ridged on margin, anteroventral cavity pubescent; propodeal carinae bowed medially, sparsely pubescent. Segment 1 of gaster partially visible, crenulate, as broad as long, segments 1–3 visible in lateral view, impunctate, tergite 2 the largest, hypopygium not pronounced, ventral spine with long sparse setae. Legs orange-yellow, coxae elongate, swollen basally, trochanters normal, femora short, swollen medially, tibiae normal with two apical spines, metatarsus shorter than tarsal segments 2–5 combined, claws simple. Wing surface pubescent, apical margins with a hair fringe, radial cell of forewing closed on margin, $2.5 \times$ as long as broad

measured medially, veins heavily pigmented, vein *2rm* distinct, in form of a spur, *Rs+M* and *M* indicated, weakly pigmented.

Colour: antenna light yellow-brown basally, dark at apex, head and thorax blackish, gaster chestnut-brown.

♂ unknown.

MATERIAL EXAMINED

Holotype ♀, **South Africa**: Mossel Bay, Cape Province, iv.1927 (*R. E. Turner*) (BMNH).

Paratype. 1 ♀, same data as holotype (BMNH).

REMARKS. This species closely resembles *furcula* and could, without close examination, be mistaken for it. The form of the notaulices and the large, almost round cup, distinguish it from related species.

Eucoilidea nitida (Benoit) comb. n.

(Figs 115, 133, 134, 135, 137)

Afrostilba nitida Benoit, 1956: 544. Holotype ♀, ZAIRE (MRAC) [examined].

DESCRIPTION. ♀. Antenna 13-segmented, subclavate, segments 3 and 4 equal in length, 4–13 forming a weak club, each segment slightly shorter and wider in length than preceding one (Fig. 133), apical segment never twice as long as wide. Face, viewed frontally, smooth, shining, malar space with a distinct epistomal suture, eyes diverging at top and bottom, frontal area pronounced, mandibles tridentate. Pronotum either side of pronotal plate smooth, sometimes with weak sculpture on the margins. Pronotal plate not projected forward, lateral fovea either side of medial bridge open laterally, fovea broad, narrow, separated by a narrow bridge medially (Fig. 134). Mesoscutum smooth, polished, notaulices distinct, gradually converging on approach to scutellar suture, almost as far apart at juncture as half width of scutellar cup, scutellar foveae smooth, polished, scutellar disc punctate-reticulate, with scattered hairs, scutellar cup almost oval, with a large apical fovea (Fig. 137), rim of cup with small fovea on lateral margin, apex of disc obscured by cup; carinae of propodeum parallel, pubescent on outer margins. Mesopleura with a distinct suture, metapleura smooth, polished. Segment 1 of gaster short, wider than long, crenulate, segment 2 the largest in lateral view, densely punctured on apical half viewed laterally, remaining segments not visible, hypopygium short. Legs yellow, coxae yellow, meta-tarsus as long as tarsal segments 2–4 combined, tibiae with two apical spurs, tarsal claws simple. Wings pubescent on surface, apical margins with a hair fringe, radial cell of forewing closed on anterior margin, *Rs+M* and *M* weakly indicated, radial cell 4 × as long as broad, elongate (Fig. 135), *2rm* as broad as long. Colour: antenna yellowish black basally, black apically, head and thorax black, gaster dark chestnut-red-brown, legs yellowish.

♂. Antenna 15-segmented, filiform, segment 3 the largest, strongly curved, swollen apically, longer than 4 (Fig. 115).

MATERIAL EXAMINED

Holotype ♀, **Zaire**: Kivu, Rutshuru, 11.v.1936 (*L. Lippens*) (MRAC).

Paratypes. **Ghana**: 2 ♀, 5 ♂ (BMNH). **Kenya**: 11 ♀, 1 ♂ (BMNH). **South Africa**: 1 ♀ (BMNH). **Zaire**: 27 ♀, 2 ♂ (MRAC). **Zambia**: 3 ♀ (BMNH). **Zimbabwe**: 1 ♀ (BMNH).

REMARKS. A difficult species to separate from *conversa*, but distinguished from it by the overall shape of the antenna and the convergence of the notaulices towards the scutellar suture (Figs 133, 137).

Eucoilidea pallida sp. n.

(Figs 83, 93, 112, 117, 141)

DESCRIPTION. ♀. Antenna 13-segmented, subclavate, pale yellow, segments 9–13 forming a weak club. Face, viewed frontally, smooth, polished, frontal area raised, face with long scattered pubescence, malar space with a distinct carina, mandibles tridentate, eyes further apart than height of an eye measured medially, diverging at top and bottom (*cf.* Fig. 117). Pronotum either side of pronotal plate crenulate-foveolate (*cf.* Fig. 83), pronotal plate not protruding, lateral fovea either side open laterally. Mesoscutum smooth, shining, the juncture with pronotum weakly channelled, notaulices distinct, converging sharply towards scutellum at a point two-thirds distance from scutellar suture (Figs 93, 141), scutellar disc transversely strigose, visible on lateral margins, viewed dorsally, apex sometimes obscured by scutellar cup, scutellar cup elongate, with a large apical depression, rim of cup with a ring of smaller fovea or pits. Mesopleura with a distinct suture, carinae of propodeum parallel. Segment 1 of gaster short, as broad as long, crenulate, segment 2 the largest, obscuring in lateral view remaining tergites of gaster, impunctate,

hypopygium hardly visible, ovipositor protruding. Legs orange-yellow, tibiae with two apical spines, claws simple. Wings pubescent on surface, apical margins with a distinct hair fringe, radial cell of forewing closed on margin but very weakly pigmented on anterior margin (*cf.* Fig. 112), at least twice as long as wide, *Rs+M* and *M* indicated but not pigmented, *2rm* distinct. Colour: antenna pale yellow, head and thorax black, gaster chestnut-red-black.

♂ unknown.

MATERIAL EXAMINED

Holotype ♀, **South Africa**: Mossel Bay, Cape Province, 5–31.vii.1921 (*R. E. Turner*) (BMNH).

Paratypes. **South Africa**: 10 ♀ (BMNH). **Southern Yemen**: 1 ♀ (BMNH). **Zaire**: 2 ♀ (MRAC).

REMARKS. This species is close to *fetura* but can be separated by the very distinctive, bright yellow antenna and the large scutellar cup. It is far more robust than *fetura*. A male from Zambia (BMNH) could be this species, but without an associated female I am reluctant to treat it as such.

Eucoilidea parma sp. n.

(Figs 88, 138, 139, 140)

DESCRIPTION. ♀. Antenna 13-segmented, subclavate, segments 3 and 4 subequal in length, segments 6–13 forming a weak club, all with rhinaria, each segment longer than broad, slightly wider apically than at base (Figs 88, 138). Face, viewed frontally, smooth, shining, malar space with epistomal suture, mandibles tridentate. Pronotum with pubescence either side of pronotal plate, surface aciculate. Pronotal plate very weakly produced, foveae either side open on lateral margins. Mesoscutum smooth, polished, notaulices distinct, converging sharply at a point one-quarter from scutellar suture, not confluent (Fig. 139), scutellar foveae deep basally, scutellar disc punctate-reticulate, with long scattered hairs, scutellar disc visible laterally and apically, not obscured by scutellar cup; carinae of propodeum parallel, pubescent on either side. Mesopleura with a distinct carina. Segment 1 of gaster short, wider than long, crenulate, segment 2 the largest in lateral view, densely punctured on apical third, segment 3 partially visible in lateral view, hypopygium short. Legs yellow, coxae orange-yellow, metatarsus as long as tarsal segments 2–4 combined, tibiae with 2 apical spurs, tarsal claws simple. Wings ciliate or pubescent on surface, with apical hair fringe on margins, radial cell of forewing closed on anterior margin, *Rs+M* and *M* not indicated, radial cell $3 \times$ as long as wide, elongate (Fig. 140), vein *2rm* longer than broad. Colour: antenna yellowish without darkened apical segments, head and thorax black, gaster chestnut-red.

♂ unknown.

MATERIAL EXAMINED

Holotype ♀, **Nigeria**: Ile-Ife, W. State, vi.1973 (*J. T. Medler*) (BMNH).

Paratypes. **Nigeria**: 2 ♀ (BMNH). **Madagascar**: 1 ♀ (BMNH). **Zaire**: 4 ♀ (MRAC).

REMARKS. Similar to *conversa* but distinguished by the subclavate antenna.

Eucoilidea perangusta sp. n.

(Figs 95, 96, 137, 143)

DESCRIPTION. ♀. Antenna 13-segmented, weakly subclavate, segment 3 very slightly shorter than 4, 6–13 forming a very weak club, all with rhinaria (Fig. 96). Face, viewed frontally, smooth, shining, malar space with a distinct epistomal suture, eyes diverging at top and bottom, frontal area pronounced, mandibles tridentate. Pronotal plate weakly protruding viewed dorsally, lateral fovea open, wide and narrow, pronotum either side of plate with long scattered pubescence, surface with widely spaced aciculate sculpture. Mesoscutum smooth, polished, juncture with pronotum on lateral margins crimped, notaulices distinct, converging gently towards scutellum (*cf.* Fig. 137), scutellar fovea shallow, scutellar disc coriaceous, cup oval with a large central fovea, outer margins of cup without a ring of smaller fovea: propodeal carinae parallel. Mesopleura smooth, polished, with distinct suture. Segment 1 of gaster short, broader than long, crenulate, segment 2 the largest in lateral view, remaining segments not visible, hypopygium short, not protruding. Legs deep yellow, meta-tarsus shorter than tarsal segments 2–4 combined, tibiae with two apical spines, tarsal claws simple. Wings pubescent on surface, apical margins with a hair fringe, radial cell of forewing closed on anterior margin, elongate, $3.6 \times$ as long as wide, *Rs+M* and *M* weakly pigmented, *2rm* broader than long (Fig. 95). Colour: antenna pale basally, apical 7 segments dark brown, head and thorax black, gaster orange-yellow in ♀, brownish in ♂.

♂. Antenna filiform, 3rd segment curved, swollen distally (Fig. 143).

MATERIAL EXAMINED

Holotype ♀, **Zambia**: 15 km E. Lusaka, 13–22.xi.1979 (*R. A. Beaver*) (BMNH).

Paratypes. **Zimbabwe**: 1 ♀ (BMNH). **Zaire**: 1 ♀ (MRAC). **Zambia**: 2 ♀, 4 ♂ (BMNH).

Eucoilidea trulla sp. n.

(Figs 79, 85, 107, 145, 147)

DESCRIPTION. ♀. Antenna 13-segmented, subclavate, segment 3 larger than 4, shorter than 4+5, 4 and 5 subequal, 5–12 gradually decreasing in length (Fig. 79). Head, viewed frontally, smooth, shining, frontal line (frons) convex, malar space with epistomal suture distinct, mandibles tridentate, cheeks sharply converging. Pronotal plate not projecting, lateral fovea open on margin, sparsely pubescent on outer margins. Mesoscutum with notaulices distinct, converging two-thirds of way towards scutellum but not confluent, scutellar disc punctate-rugose, clearly visible laterally and apically (*cf.* Fig. 85), scutellar cup large with a fovea basally, with traces of small punctures around rim, scutellar fovea large, polished. Mesopleura smooth, polished, suture distinct; carinae of propodeum parallel. Segment 1 of gaster short, wider than long, crenulate, segment 2 the largest in lateral view, impunctate, segments 3 and 4 punctate, hypopygium short with long basal setae, ovipositor sheath short (Fig. 145). Legs yellow-orange, tibiae with 2 apical spurs, claws simple. Wings pubescent on surface, with apical fringe of hairs, radial cell of forewing closed on margin, elongate, *Rs+M* and *M* indicated, not pigmented (Fig. 147). Colour: antenna black, head and thorax black, gaster black dorsally, chestnut-red ventrally.

♂. Antenna 15-segmented moniliform, 3rd segment the largest, weakly curved (Fig. 107).

MATERIAL EXAMINED

Holotype ♀, **South Africa**: Natal, nr Pietermaritzburg, 21.iii.1980 (*P. Joubert*) (BMNH).

Paratypes. **South Africa**: 1 ♀, 2 ♂, same data as holotype (BMNH). **Zaire**: 12 ♀, 6 ♂ (MRAC).

REMARKS. Closely related to a group of species in which the third antennal segment of the ♀ is clearly longer than the 4th, and the gaster is finely punctate.

Eucoilidea tyrus sp. n.

(Figs 80, 148)

DESCRIPTION. ♀. Antenna 13-segmented, filiform, segment 3 weakly curved, $1.2 \times$ length of 4, 4–13 with rhinaria, 4–6 subequal in length, 7–13 each progressively shorter than the preceding segment. Head, viewed frontally, smooth, shining, eyes further apart measured medially than height of an eye, weakly converging, face with scattered setae, mandibles tridentate, basal tooth blunt, malar suture distinct. Pronotum either side of pronotal plate smooth with scattered pubescence, pronotal plate not conspicuously produced forward, medial bridge narrow, fovea on lateral margins open (Fig. 148). Mesoscutum smooth, polished, with scattered hairs, notaulices complete, converging towards scutellum, further apart at juncture with scutellum than width of one notauli, scutellar cup slightly longer than broad, apical half with a large fovea, rim of cup with a number of minute fovea around edge, scutellar disc reticulate-rugose, visible in lateral and apical view. Mesopleura smooth, shining, suture distinct, metapleura ridged on upper part, anteroventral cavity with a few sparse hairs; propodeal carinae parallel, densely pubescent on lateral margins. Segment 1 of gaster crenulate, short, wider than long, segment 2 the largest in lateral view, apical half finely punctate, visible part of segment 3 finely punctate, hypopygium pronounced, broad with long basal setae, ventral spine produced past apex of gaster. Legs bright yellow, coxae short, broad, all femora swollen medially, tibiae with two apical spurs, slender, as long as tarsi. Wing surface pubescent, apical margins with a hair fringe, radial cell of forewing closed on margin, $3.6 \times$ as long as broad measured medially (Fig. 80), *Rs+M* and *M* indicated by weak pigmentation, base of wing not fumate. Colour: antenna yellow basally, apical segments darker, head and thorax blackish brown, gaster brownish, legs bright orange-yellow.

♂ unknown.

MATERIAL EXAMINED

Holotype ♀, **Cameroun**: Nkoemvon, x–xi.1980 (*D. Jackson*) (BMNH).

REMARKS. Closely related to *marcellus* but separated by the gaster and the form of the scutellum.

***Eucoilidea urundiensis* Benoit**

(Figs 98, 99, 100, 139)

Eucoilidea urundiensis Benoit, 1956: 548. Holotype ♀, ZAIRE (MRAC) [examined].

DESCRIPTION. ♀. Antenna 13-segmented, subclavate, segment 3 longer than 4, 5 shorter than 4, 5–13 with rhinaria, forming a weak club (Fig. 98). Face, viewed frontally, smooth, shining, with long scattered pubescence, malar space with epistomal suture, eyes slightly further apart than height of an eye measured medially, weakly converging, mandibles tridentate. Pronotal plate not produced forward, foveae either side of medial bridge open. Pronotum either side of plate with sparse scattered hairs on an aciculate surface. Mesoscutum smooth, polished, notaulices distinct, converging sharply towards scutellar suture two-thirds from scutellar suture, scutellar fovea large, smooth, polished, scutellar cup large, almost round, with a large central fovea, rim of cup with a few fovea around edges, scutellar disc rounded apically, surface reticulate-rugose (cf. Fig. 139) with scattered hairs on apical margin; carinae of propodeum diverging at base, with dense pubescence on either side; mesopleural suture distinct, metapleura smooth. Segment 1 of gaster wider than long, short, crenulate, segment 2 the largest in lateral view, segments 3 and 4 partially visible, finely punctate (Fig. 100), hypopygium with basal hairs. Legs orange, with moderately dense pubescence, hind meta-tarsus as long as tarsal segments 2–4 combined, tibia with two apical spines, tarsal claws simple. Wings pubescent on surface, apical margins with a hair fringe, radial cell of forewing closed, 2 × as long as wide, *Rs*+*M* and *M* absent, 2*rm* longer than wide. Colour: antenna yellowish with dark apices, head and thorax blackish, gaster chestnut-brown.

♂. Antenna 15-segmented, segment 3 longer than 4, curved, flattened on outer margins (Fig. 99).

MATERIAL EXAMINED

Zaire: 1 ♀ (holotype), Urundi (Mosso), Makoronkwe, 1450 m, 12.iii.1953 (*P. Basilewsky*) (MRAC).

Uganda: 1 ♂ (BMNH). Zaire: 12 ♀ (MRAC). Zimbabwe: 1 ♀ (BMNH). (All paratypes.)

HEXACOLA Foerster

Hexacola Foerster, 1869: 342. Type-species: *Eucoela picicrus* Giraud, by monotypy.

Hexaplasta Foerster, 1869: 345. Type-species: *Cothonaspis hexatoma* Hartig, 1841: 357, by original designation. [Synonymy by Rohwer & Fagan, 1917.]

DIAGNOSIS. ♀ antenna generally 13-segmented but in some species 11–12 segmented, clavate, ♂ antenna 15-segmented, segment 3 curved, longer than 4th (Fig. 39); wings pubescent, ciliate, radial cell of forewing open on front margin (vein *R*₁ projecting slightly on margin but not joining *Rs*₂), *Rs*+*M* and *M* (cubitus) indicated; scutellar cup elliptical, not extending to apex of disc, scutellar disc striate on lateral margins.

DISCUSSION. Closely related to *Kleidotoma* but distinguished by the shape of the radial cell of the forewing and the absence of an incision on the apical margin of the wing. In *Hexacola* the apex of the forewing is normally rounded, neither truncate nor incised. The scutellar disc is not as distinctly striated as in *Kleidotoma* and the wings are generally narrow.

DISTRIBUTION. Europe; South Africa; North and South America.

BIOLOGY. The type-species of *Hexaplasta* is a known parasite of *Oscinella frit* (L), the frit fly (Imms, 1930; Kerrich & Quinlan, 1960).

REMARKS. Nordlander (1981) notes that some earlier authors considered that the nominal species designated by Foerster as type-species of *Hexacola* was misidentified and that in fact the species was *Kleidotoma hexatoma* Thomson, 1862 (Kieffer, 1901, 1902; Ashmead, 1903; Dalla Torre & Kieffer, 1910). Ashmead (1903) also designated *K. hexatoma* Thomson as type-species of *Hexacola*. Rohwer & Fagan (1917) concluded that *Eucoela picicrus* Giraud, 1860 is the type-species of *Hexacola* by original designation and monotypy. They made *Hexaplasta* Foerster a junior synonym of *Hexacola*, thereby acting as first revisers. Nordlander (1981) is submitting a case to the International Commission on Zoological Nomenclature to decide on the type-species designation, and states that he has compared a female in the Foerster collection, labelled '*Hexacola picicrus* Giraud', with syntypes of *Kleidotoma hexatoma* Thomson, and considers them to be conspecific.

Key to the Afrotropical species of *Hexacola* Foerster**Females**

- 1 Antenna of ♀ 11–12 segmented, club 5–6 segmented, segment 3 as long as 4+5

- Antenna of ♀ 13-segmented, club 4–8 segmented 5
- 2 Antenna of ♀ 11-segmented, club 5-segmented, sharply defined, together distinctly longer than flagellar segments 1–6, 4–6 quadrate (Fig. 149) *absensa* sp. n. (p. 273)
- Antenna of ♀ 12-segmented, club 5–6 segmented, flagellar segments longer than broad 3
- 3 Antennal club 5-segmented, as long as combined lengths of flagellar segments 1–7, segments 4–7 each slightly longer than wide (Fig. 150); mesopleural suture absent *pallida* sp. n. (p. 277)
- Antennal club 6-segmented, much longer than combined lengths of flagellar segments 1–6, segments 4–6 as wide as long or longer than wide (Figs 151, 152); mesopleural suture complete 4
- 4 Antennal segments 4–6 longer than wide (Fig. 151) *atropos* sp. n. (p. 274)
- Antennal segments 4–6 as wide as long (Fig. 152) *zama* sp. n. (p. 279)
- 5 Antennal club 4–5 segmented 6
- Antennal club with 6 or more segments 8
- 6 Antennal club 4-segmented (Fig. 153) *fringa* sp. n. (p. 276)
- Antennal club 5-segmented (Figs 154, 155) 7
- 7 Club segments together slightly shorter than flagellar segments 1–8, 4–8 longer than broad (Fig. 154) *quisnama* sp. n. (p. 278)
- Club segments together much longer than flagellar segments 1–8, as broad or broader than long (Fig. 155) *quinqueclavata* sp. n. (p. 278)
- 8 Antennal club 6–7 segmented (Figs 157, 60) 9
- Antennal club 8-segmented (Fig. 156).
Segment 3 as long as 4+5, apex of tergite 2 of gaster and tergites 3–5 completely punctate *octoclava* sp. n. (p. 277)
- 9 Antennal club 6-segmented (Figs 157, 158) 10
- Antennal club 7-segmented (Fig. 160) 12
- 10 Antennal club sharply defined (Fig. 158), segments 4–7 of flagellum as wide as long, apex of tergite 2 and segments 3 and 4, when visible, punctate 11
- Antennal club not sharply defined, segments 4–7 of flagellum longer than wide, not compacted (Fig. 157); gaster impunctate *hexatoma* (Hartig) (p. 276)
- 11 Flagellar segments 4–7 of antenna wider than long, compacted, club segments together much longer than segments 1–7 combined (Fig. 158) *compacta* sp. n. (p. 275)
- Flagellar segments 4–7 of antenna as wide as long, not compacted, club segments together as long as segments 1–7 (Fig. 159).
Bicoloured; legs bright yellow; gaster punctate *bifaria* sp. n. (p. 275)
- 12 Antennal club sharply defined (Fig. 160) *septemius* sp. n. (p. 279)
- Antennal club not sharply defined (Fig. 161).
Segments 1–7 of flagellum bright yellow, segments 8–13 blackish brown, gaster impunctate *amantia* sp. n. (p. 274)

Males

- 1 Vertex of head striate; segment 3 of antenna the longest, strongly swollen distally, outer margins flattened medially (Fig. 39); radial cell of forewing $2.5 \times$ as long as wide, vein Rs_2 not extended along wing margin *hexatoma* Hartig (p. 276)
- Vertex of head smooth, polished; segment 3 of antenna the longest, curved, weakly, swollen apically (Fig. 170); radial cell of forewing long and narrow, $3.5-4.0 \times$ as long as broad, Rs_2 sometimes extended along wing margin 2
- 2 Apex of tergite 2 of gaster and following segments punctate; radial cell almost as wide as long ($1.25 \times$ as long as wide), Rs_2 weakly extending along wing margin *octoclava* sp. n. (p. 277)
- Gaster impunctate; radial cell elongate, Rs_2 extended along wing margin
bifaria- and *quinqueclavata*-groups

Hexacola absensa sp. n.

(Figs 40, 149, 168)

DESCRIPTION. ♀. Antenna 11-segmented, with sharply defined 5-segmented club, the club longer than

flagellar segments 1–6, 4–6 quadrate (Fig. 149). Head, viewed frontally, a little longer than broad, smooth, shining, eyes almost round, further apart measured medially than height of an eye, malar groove distinct. Pronotal plate projected forward, anterior and posterior parts joined by narrow medial bridge, fovea on either side open on lateral margins (Fig. 40); pronotum either side of pronotal plate with a tuft of pubescence. Mesoscutum smooth, polished, notaulices absent, lateral bars of scutellum polished with a few striations apically; scutellar foveae wider than long, angular, scutellar cup long, narrow, polished, weakly excavate, not extending to apex of disc (*cf.* Fig. 168), scutellar disc with broken longitudinal striations laterally, apex rounded; propodeal carinae obscured by pubescence. Mesopleura smooth, polished, suture complete [metapleura not entire due to pin on which the specimen is mounted]. Segment 1 of gaster obscured by a ring of pubescence at base of tergite 2, not complete on dorsal surface, tergites 3 and 4 visible in lateral view, punctate, hypopygium not prominent. Wings short, broad, surface pubescent, apical hair fringe sparse, radial cell of forewing partially open on wing margin but appears closed due to pigmentation, vein R_1 not complete, apex of wing rounded. Legs short, robust, mid and hind coxae thick, femora swollen medially, tibiae broad apically, tarsi slender. Colour: club segments of antenna brownish, flagellar segments orange-brown, head, thorax and gaster dark brown, legs yellow.

♂ unknown.

MATERIAL EXAMINED

Holotype ♀, **Zaire**: Elele, Buta, 450 m, 11.iv.1935 (*G. F. de Witte*) (MRAC).

REMARKS. Distinguished primarily from all other species in the genus by the 11-segmented antenna.

Hexacola amantia sp. n.

(Figs 161, 162, 163, 167)

DESCRIPTION. ♀. Antenna 13-segmented with a weakly defined, 7-segmented club, flagellar segments 3–6 each longer than wide, 3 longer than 4 (Fig. 161). Head, viewed frontally, smooth, polished, with scattered hairs, eyes oval, further apart measured medially than height of an eye, malar grooves distinct, mandibles with scattered setae extending to supraclypeal area, anterior tentorial pits distinct, epistomal suture present. Pronotal plate projected forward, anterior and posterior parts connected by a broad medial bridge, lateral fovea either side of bridge open (Fig. 162). Pronotum either side of plate with a tuft of hairs. Mesoscutum smooth, polished, notaulices absent, lateral bars of scutellum smooth, polished, scutellar fovea narrow, angularly opposed to each other, smooth, polished, scutellar cup oval-elongate, lateral margins of scutellar disc narrow, weakly striated (almost smooth in some specimens), apex of disc reticulate-rugose, rounded (*cf.* Fig. 167), propodeal carinae subparallel, weakly bowed posteriorly at juncture with nucha, lateral margins of propodeum densely pubescent. Mesopleura and metapleura smooth, polished, metapleura with traces of ridges, mesopleural carina complete. Segment 1 of gaster obscured by a dense ring of hairs at base of tergite 2, complete on dorsal surface, tergite 2 occupying whole of visible surface in lateral view, smooth, impunctate, hypopygium weakly protruding, ventral spine not visible. Wing surface pubescent, apical margins rounded, with a long hair fringe, radial cell of forewing open on margin, vein R_1 partially projected along margin. Legs normal, mid and hind coxae robust, $2 \times$ as long as broad, swollen basally, trochanters longer than broad, fore and mid femora longer than fore and mid tibiae, hind femora shorter than hind tibia, fore and mid-tibiae longer than fore and mid-tarsi, hind tibiae and tarsi subequal in length. Colour: antennal segments 1–7 orange-yellow, 8–13 dark brown, head, thorax and gaster blackish brown, legs yellow.

♂. Antenna 15-segmented, filiform, segment 3 the largest, strongly curved, surface flattened on outer margin (Fig. 163).

MATERIAL EXAMINED

Holotype ♀, **Nigeria**: Samaru, em. 30.viii.1968, ex Oscinellinae pupa on *Scoliophthalmus micantipennis* Duda (guinea corn shoot) (J. C. Deeming) (BMNH).

Paratypes. **Nigeria**: 5 ♀, 3 ♂ (BMNH). **Uganda**: 1 ♀ (BMNH). **Zaire**: 7 ♀, 2 ♂ (MRAC).

REMARKS. Closely related to *septemius* but distinguished by the antennal shape (Fig. 161).

Hexacola atropos sp. n.

(Figs 151, 164)

DESCRIPTION. ♀. Antenna 13-segmented with a sharply defined 6-segmented club (Fig. 151), the club much longer than flagellar segments 1–6, flagellar segments longer than wide. Head, viewed frontally, almost

rounded, eyes slightly further apart than height of an eye measured medially, face smooth, polished, with a few scattered setae, malar groove distinct, vertex polished. Pronotal plate projected forward, anterior and posterior parts joined by a narrow medial bridge, fovea either side open laterally; pronotum either side of pronotal plate with a few long setae. Mesoscutum smooth, polished, notaulices absent, lateral bars of scutellum smooth, polished, scutellar foveae small, wider than long, polished, scutellar cup long, narrow, with a small apical fovea, scutellar disc longitudinally striate on lateral margins, apex rounded with a few long setae; propodeal carinae weakly bowed, sides of propodeum densely pubescent. Mesopleura and metapleura smooth, polished, mesopleural carinae distinct. Segment 1 of gaster completely obscured by dense wool-like ring of pubescence at base of tergite 2, complete on dorsal surface, tergite 2 the largest in lateral view, tergites 3 and 4 partially visible, punctate, hypopygium short, broad, ventral spine short. Wing surface densely pubescent, apical hair fringe long, radial cell of forewing partially closed on wing margin, apex of wing rounded (Fig. 164). Legs normal, mid and hind coxae swollen, femora swollen basally, tibiae broad apically, tarsi longer than tibiae. Colour: antenna orange-brown, basal segments lighter, head brownish, thorax orange-yellow, gaster brownish, legs pale yellow.

♂ unknown.

MATERIAL EXAMINED

Holotype ♀, **Cameroun**: Nkoemvon, i-ii.1980 (*D. Jackson*) (BMNH).

Paratypes. **Cameroun**: 1 ♀ (BMNH). **Zaire**: 1 ♀ (MRAC).

REMARKS. Distinguished from *zama* by the antenna (Fig. 151).

Hexacola bifaria sp. n.

(Figs 159, 165)

DESCRIPTION. ♀. Antenna 13-segmented with distinct 6-segmented club, together longer than flagellar segments 1–7, segments 4–7 each as broad as long (Fig. 159). Head, viewed frontally, smooth, polished, with a few hairs medially, anterior tentorial pits prominent, epistomal suture distinct, malar grooves complete, cheeks weakly converging, eyes almost round, further apart measured medially than height of an eye, mandibles bright yellow. Pronotal plate viewed dorsally, projected forward, anterior and posterior parts connected medially by a broad bridge, fovea on each side open laterally, pronotum either side of pronotal plate with a tuft of pubescence. Mesoscutum smooth, polished, notaulices absent; lateral bars of scutellum smooth, polished, scutellar foveae shallow, polished, as wide as long, scutellar cup narrow, elliptical, scutellar disc striate on lateral margins, apex rounded with weak radiating striae; carinae of propodeum subparallel, converging towards nucha, lateral margins of propodeum densely pubescent, meso- and metapleura smooth, polished, mesopleural carinae complete, metapleura with one or two ridges in upper region. Segment 1 of gaster obscured by ring of dense pubescence at base of tergite 2, complete on dorsal surface, tergites 2–4 visible in lateral view, apex of tergite 2 and visible parts of 3 and 4 punctate, tergite 2 the largest in lateral view, hypopygium short, broad, ventral spine as long as hypopygium. Wing surface pubescent, apical margins rounded, with a hair fringe, radial cell of forewing open on wing margin, vein R_1 partially extended along margin. Legs normal, coxa a little longer than wide, swollen medially, trochanters as long as wide, front femora swollen medially, longer than tibiae, mid femora and tibiae subequal in length, femora with usual medial swelling, hind femora shorter than hind tibiae, swollen basally. Colour: club segments of antenna darker than basal flagellar segments, head, thorax and gaster dark chestnut-brown, legs pale yellow.

♂. Antenna 15-segmented, filiform, segment 3 the largest, bent or angled at base, the outer side flattened (Fig. 165).

MATERIAL EXAMINED

Holotype ♀, **Zimbabwe**: Salisbury, Chishawasha, i.1979 (*A. Watsham*) (BMNH).

Paratypes. **Nigeria**: 1 ♀ (BMNH). **Zaire**: 17 ♀, 2 ♂ (MRAC); 3 ♀ (BMNH).

REMARKS. Closely similar to *compacta* but distinguished by the form of the antenna.

Hexacola compacta sp. n.

(Figs 158, 166)

DESCRIPTION. ♀. Antenna 13-segmented, with sharply defined 6-segmented club, the club $2 \times$ as long as flagellar segments 1–7, segment 3 subequal in length to 4+5, segments 4–7 each broader than long, segment 1 of club (8th flagellar segment) as long as segments 4–7 combined and much wider (Fig. 158). Head, viewed frontally, smooth, shining, with scattered hairs in supraclypeal area and on mandibles, eyes

semi-circular, further apart measured medially than height of an eye, anterior tentorial pits distinct, malar groove percurrent, cheeks converging, vertex polished. Pronotal plate projected forward, anterior and posterior parts connected medially by a narrow bridge, fovea on either side open laterally (Fig. 166). Pronotum on lateral margins of plate with tufts of pubescence. Mesoscutum smooth, polished, with trace of notaulices, lateral bars of scutellum smooth, polished, scutellar foveae as wide as deep, polished, scutellar cup longer than broad, outer rim paler than middle, apex of cup with lateral fovea, scutellar disc reticulate-rugose, not striated, apex rounded. Meso- and metapleura smooth, polished, mesopleural carinae complete, metapleura without ridges. Propodeal carinae parallel, lateral margins of propodeum pubescent. Segment 1 of gaster obscured by a dense ring of pubescence at base of tergite 2, complete on dorsal surface, tergites 2–3 visible in lateral view, tergite 2 the largest in lateral view, visible part of tergite 3 punctate, hypopygium small, ventral spine weakly produced. Wing surface pubescent, apex of wing broad with apical hair fringe, radial cell of forewing partially open on wing margin, i.e. vein R_1 weakly produced along margin, not closing cell. Legs short, robust, hind coxa $2 \times$ as long as wide, swollen basally, trochanters longer than broad, femora swollen basally, shorter than tibiae, tibiae long, narrow basally, wide apically, tibiae and tarsi subequal in length. Colour: antenna dark brown, head brownish, gaster and thorax chestnut-brown, legs yellow-orange.

♂ unknown.

MATERIAL EXAMINED

Holotype ♀, **Zaire**: 25.viii.1951 (*J. Verschuren*) (MRAC).

Paratypes. **Zaire**: 2 ♀ (MRAC).

REMARKS. Distinguished from other closely related species by the bright yellow legs.

Hexacola fringa sp. n.

(Figs 153, 164, 167)

DESCRIPTION. ♀. Antenna 13-segmented with weakly defined, 4-segmented club, the total length of club less than combined lengths of flagellar segments 1–9 which are each longer than broad (Fig. 153). Head, viewed frontally, as broad as long, eyes round, weakly converging towards clypeus, further apart measured medially than height of an eye, face smooth, polished, with a few sparse hairs. Pronotal plate projected forward, anterior and posterior parts joined by a medial bridge, fovea on either side open laterally, pronotum on either side of pronotal plate with a tuft of pubescence. Mesoscutum smooth, polished, notaulices absent, in their place a row of hair bases, lateral bars of scutellum short, broad basally, polished, scutellar foveae small, almost round, scutellar cup long, narrow, not well defined, scutellar disc with aberrant sculpture, apex rounded (Fig. 167); propodeal carinae parallel, weakly converging basally, sides of propodeum densely pubescent. Mesopleura and metapleura smooth, polished, mesopleural carinae complete, metapleura ridged near posterior margin. Segment 1 of gaster obscured by a ring of dense pubescence at base of tergite 2 which is complete on dorsal surface, tergites 3–4 visible in lateral view, impunctate, tergite 2 the largest visible tergite, hypopygium not pronounced. Wings densely pubescent, apical fringe long, wing margin at apex not sharply rounded, radial cell of forewing open on wing margin, vein R_1 weakly projected along margin (*cf.* Fig. 164). Legs with mid and hind coxae short, front femora the largest, swollen, mid and hind femora short, swollen, tibiae short, broad apically, front tarsi longer than front tibiae, mid and hind tibiae subequal in length to their tarsi. Colour: antenna yellow basally, club segments darker, head dark brown, thorax and gaster dark chestnut-brown, legs pale yellow.

♂ unknown.

MATERIAL EXAMINED

Holotype ♀, **Zimbabwe**: Salisbury, Chishawasha, i.1979 (*A. Watsham*) (BMNH).

Paratypes. **Zimbabwe**: 3 ♀, same data as holotype (BMNH).

REMARKS. Separated primarily from *quisnama* by the antennal structure (Fig. 153).

Hexacola hexatoma (Hartig)

(Figs 157, 168, 169)

Cothonaspis hexatoma Hartig, 1841: 357. Lectotype ♀. GERMANY, designated by Quinlan *in* Kerrich & Quinlan, 1960: 191 [examined].

DESCRIPTION. ♀. Antenna 13-segmented, subclavate, with weakly defined 6-segmented club, flagellar segments 1–7 each longer than broad (Fig. 157). Head, viewed frontally, smooth, polished, with a few

scattered hairs, particularly in region of mandibles, anterior tentorial pits indicated, malar grooves complete, eyes further apart measured medially than height of an eye, cheeks weakly converging, vertex strigose. Pronotal plate projected forward, anterior and posterior parts connected by a medial bridge, fovea on either side of pronotal plate open laterally. Pronotum either side of pronotal plate with a tuft of pubescence. Mesoscutum smooth, polished, with scattered setae, notaulices absent, lateral bars of scutellum polished, scutellar cup narrow, elliptical with a fovea on apical half, scutellar disc with fine aberrant striate sculpture (Fig. 168), scutellar fovea polished, wide, narrow, apex of scutellar disc rounded. Mesopleura and metapleura polished, mesopleural carina complete, lateral margins of pronotum densely pubescent, propodeal carinae subparallel. Segment 1 of gaster obscured by dense ring of pubescence at base of tergite 2, complete on dorsal surface, tergites 2–4 visible in lateral view, impunctate, tergite 2 the largest, hypopygium broad. Wing surface pubescent with apical fringe of hairs, radial cell of forewing open on wing margin, vein R_1 partially projected along wing margin. Legs long, slender, mid and hind coxae pubescent. Colour: antenna, head, thorax and gaster brownish black.

♂. Antenna 15-segmented, filiform, segment 3 curved, swollen at apex, flattened on outer margin (Fig. 169).

MATERIAL EXAMINED

Lectotype ♀, **Germany**.

England: 30 ♀, 28 ♂ (BMNH). **Uganda**: 1 ♀, 1 ♂ (BMNH).

REMARKS. Similar to *compacta* and *bifaria* but separated initially by the antennal club and the ratio of the basal flagellar segments, and by the impunctate gaster.

Hexacola octoclava sp. n.

(Figs 156, 170)

DESCRIPTION. ♀. Antenna 13-segmented with a sharply defined 8-segmented club, much longer than flagellar segments 1–5 combined, segment 3 as long as 4+5 (Fig. 156). Face, viewed frontally, wider than long, eyes converging, slightly further apart than height of an eye measured medially, face smooth, polished, with sparse setae in supraclypeal area and on mandibles, malar grooves distinct. Pronotal plate distinct, projected forward, anterior and posterior parts connected by a medial bridge, fovea on either side open on lateral margins; pronotum either side of pronotal plate with tufts of pubescence. Mesoscutum smooth, polished, notaulices absent, lateral bars of scutellum polished, scutellar foveae kidney-shaped, scutellar cup narrow, elliptical, not extending to apex of scutellar disc, lateral margins of disc with broken striate sculpture laterally, reticulate-rugose basally; propodeal carinae subparallel, lateral margins pubescent. Mesopleural suture complete, metapleura smooth, polished. Segment 1 of gaster obscured by a dense ring of pubescence at base of tergite 2. Tergites 2–5 visible in lateral view, tergite 2 the largest, apex of tergite 2 and visible parts of 3–5 densely punctate, hypopygium slender, ventral spine protruding. Wing surface pubescent, apical margins rounded, with a fringe of hairs, radial cell of forewing open on margin, vein R_1 partially extended along margin of wing. Legs slender, mid and hind coxae elongate, swollen medially, trochanters longer than wide, femora short and swollen, tibiae and tarsi long, slender, subequal in length. Colour: antenna brownish apically, basal segments lighter, head, thorax and gaster dark chestnut-brown, legs yellow.

♂. Antenna 15-segmented, segment 3 curved, swollen apically, flattened on outer margin (Fig. 170).

MATERIAL EXAMINED

Holotype ♀, **Zaire**: 18.ix.1952 (*H. de Saeger*) (MRAC).

Paratypes. **Zaire**: 3 ♀, 3 ♂ (MRAC).

REMARKS. This species is distinguished from all others described here by the 8-segmented club of the antenna.

Hexacola pallida sp. n.

(Figs 148, 150, 177)

DESCRIPTION. ♀. Antenna 13-segmented, with a sharply defined 5-segmented club, the combined lengths of club segments little longer than flagellar segments 1–7 (Fig. 150). Head, viewed frontally, almost spherical, eyes rounded, further apart measured medially than height of an eye, face smooth, polished, with a few scattered setae, malar groove distinct. Pronotal plate projected forwards, anterior and posterior parts connected by a narrow medial bridge, foveae open on lateral margins (*cf.* Fig. 148); pronotum either side

of plate with tufts of pubescence. Mesoscutum smooth, polished, notaulices absent, lateral bars of scutellum short, broad basally, polished, smooth, scutellar foveae shallow, polished, as wide as long, scutellar disc rounded apically, surface with aberrant longitudinal striate sculpture, scutellar cup long, narrow, not extending to apex of disc; propodeal carinae weakly converging towards apex, densely pubescent on lateral margins. Mesopleural suture absent, metapleura smooth, polished. Segment 1 of gaster completely obscured by a ring of dense pubescence at base of tergite 2, sparse on dorsal surface, tergite 3 visible in lateral view, impunctate, hypopygium short, broad. Wings long, narrow, surface pubescent, with long apical hair fringe (Fig. 171), radial cell open on margin, apex of wing not acutely rounded. Legs short, robust, tarsi narrow, longer than tibiae. Colour: antenna yellowish, head, thorax, and gaster orange-yellow, legs pale yellow.

♂ unknown.

MATERIAL EXAMINED

Holotype ♀, **Zaire**: Eala, ix.1935 (*J. Ghequière*) (MRAC).

Paratypes. **Zaire**: 2 ♀, same data as holotype (MRAC).

REMARKS. This species is distinguished from others by the absence of a mesopleural suture, the narrow wings and the shape of the radial cell (Fig. 171).

Hexacola quinqueclavata sp. n.

(Fig. 155)

DESCRIPTION. ♀. Antenna 13-segmented with sharply defined 5-segmented club $1.3 \times$ length of flagellar segments 1–8, segment 3 subequal in length to 4+5, segments 4–8 as broad as long (Fig. 155). Face, viewed frontally, very slightly longer than wide, eyes almost circular, further apart measured medially than height of an eye, face smooth, polished, with a few sparse hairs, clypeus with sparse hairs, malar groove distinct. Pronotal plate projected forward, anterior and posterior parts connected medially by a bridge, fovea either side open laterally; pronotum either side of plate with tufts of pubescence. Mesoscutum smooth, polished, notaulices absent, lateral bars of scutellum smooth, polished, short, broad basally, scutellar foveae wider than long, polished, scutellar disc with weak broken longitudinal striations, apex weakly conical, reticulate-rugose, scutellar cup small, longer than wide, not extending to apex of scutellar disc; propodeal carinae bowed medially, lateral margins of propodeum densely pubescent, mesopleura smooth, polished, metapleura pubescent on ventral margin, mesopleural suture complete. Segment 1 of gaster obscured by a dense ring of pubescence at base of tergite 2, complete on dorsal surface, gaster impunctate, hypopygium not projecting. Wing surface pubescent, with apical hair fringe, apex of wing broad, rounded, radial cell of forewing open on margin, vein R_1 weakly extending along margin. Legs of normal proportions, mid and hind coxae swollen, longer than broad, femora short, swollen, slightly shorter than tibiae, tarsi a little longer than tibiae. Colour: antenna yellowish basally, club segments darker, head, thorax and gaster dark brownish to chestnut-red, legs pale yellow.

♂ unknown.

MATERIAL EXAMINED

Holotype ♀, **Zimbabwe**: Salisbury, Chishawasha, xii.1978 (*A. Watsham*) (BMNH).

Paratypes. **Cameroun**: 3 ♀ (BMNH). **Madagascar**: 3 ♀ (BMNH). **Nigeria**: 1 ♀ (BMNH). **Zaire**: 14 ♀ (MRAC).

REMARKS. This species is close to *quisnama* but can be separated by the antenna, the club segments being much longer than the basal flagellar segments (Fig. 155). The specimen from Nigeria is assigned to this species but is extremely light coloured and has a more prominent hypopygium.

Hexacola quisnama sp. n.

(Figs 154, 172, 173)

DESCRIPTION. ♀. Antenna 13-segmented with sharply defined, 5-segmented club, slightly shorter than flagellar segments 1–8, segment 3 as long as 4+5, 4–8 each a little longer than wide (Fig. 154). Head, viewed frontally, a little longer than wide, eyes semi-circular, further apart than height of an eye measured medially, weakly converging towards clypeus, vertex polished. Pronotal plate produced forward, anterior and posterior connected by a medial bridge, the fovea open on lateral margins, pronotum either side of pronotal plate with tufts of pubescence. Mesoscutum smooth, polished, notaulices absent, lateral bars of scutellum polished, scutellar foveae kidney-shaped, smooth, polished, scutellar cup small, little longer

than broad, not extending to apex of disc, scutellar disc with longitudinally radiating striae on lateral margins, coriaceous at apex, apex rounded (Fig. 173); propodeal carinae parallel, converging at base, densely woolly on lateral margins. Mesopleura and metapleura smooth, polished, mesopleural carinae distinct. Segment 1 of gaster obscured by dense ring of pubescence at base of tergite 2, complete on dorsal surface, tergites 2–4 visible in lateral view, tergite 2 the largest visible segment, apex of 3–5 punctate, hypopygium short, broad basally, ventral spine short. Wings densely pubescent with long apical hair fringe, forewing short, broad apically, radial cell of forewing open on margin, vein R_1 weakly indicated in part (Fig. 172). Legs normal except trochanters long, narrow, mid and hind coxae swollen basally. Colour: antenna yellowish brown basally, club segments darker, head brownish, thorax orange-yellow, gaster chestnut-brown, legs yellow.

♂ unknown.

MATERIAL EXAMINED

Holotype ♀, **Zaire**: Massif Ruwenzori, riv. Kakalari, affl. Bombi, 1,725 m, 10.iv.1954 (R. Vanschuytbroeck & H. Synave) (MRAC).

Paratypes. **South Africa**: 3 ♀ (BMNH). **Uganda**: 1 ♀ (BMNH). **Zaire**: 11 ♀ (MRAC).

REMARKS. Distinguished from *quinqueclavata* by the antennal segment ratios (Fig. 154).

Hexacola septemius sp. n.

(Fig. 160)

DESCRIPTION. ♀. Antenna 13-segmented with sharply defined 7-segmented club, longer than flagellar segments 1–6 combined, segment 3 equal in length to 4+5 (Fig. 160). Head, viewed frontally, smooth, polished, with one or two hairs above supraclypeal area, cheeks converging, eyes further apart than height of an eye measured medially between eyes, malar grooves distinct. Pronotal plate projected forward, anterior and posterior parts connected by a narrow medial bridge, fovea on either side open laterally, lateral margins of pronotum on either side of plate without tufts of pubescence, at most a few setae present. Mesoscutum smooth, polished, without trace of notaulices, lateral bars of scutellum polished, scutellar fovea kidney-shaped, wider than long, scutellar cup long, narrow, polished, not extending to apex of disc, lateral margins of disc with broken longitudinal striations, basally reticulate-rugose, rounded apically. Propodeal carinae parallel, pubescent on lateral margins. Mesopleural suture complete, mesopleura and metapleura smooth, polished. Segment 1 of gaster obscured by a ring of dense pubescence at base of tergite 2, ring complete on dorsal surface, tergites 2–4 visible in lateral view, tergite 2 the largest, apex of tergite 2 and visible parts of tergites 3+4 punctate, hypopygium not prominent, ventral spine short. Wing surface pubescent, apical margins with a fringe of hairs, apex rounded, radial cell of forewing open on margin, vein R_1 projected partially along margin. Colour: antenna yellow basally, club segments darker, head, thorax and gaster chestnut-brown, legs yellow.

♂ unknown.

MATERIAL EXAMINED

Holotype ♀, **Zaire**: 10.vii.1952 (H. de Saeger) (MRAC).

Paratypes. **Zaire**: 2 ♀ (MRAC).

REMARKS. Distinguished from *amantia*, a closely similar species, by the sharply defined club of the antenna (Fig. 160).

Hexacola zama sp. n.

(Figs 148, 152, 174)

DESCRIPTION. ♀. Antenna 12-segmented with a sharply defined, 6-segmented club, the club much longer than flagellar segments 1–6, flagellar segments 4–6 as wide as long (Fig. 152). Head, viewed frontally, smooth, polished, supraclypeal area and mandibles with a few scattered hairs, eyes almost spherical, slightly further apart measured medially, than height of an eye, anterior tentorial pits weakly indicated, malar grooves complete, cheeks weakly converging, vertex polished. Pronotal plate projected forward, anterior and posterior parts connected by a narrow medial bridge, fovea on either side open laterally (cf. Fig. 148). Pronotum either side of plate with a few hairs. Mesoscutum smooth, polished, notaulices absent, lateral bars of scutellum striate dorsally, polished laterally, scutellar fovea kidney-shaped, polished, scutellar cup elliptical, longer than wide, the rim paler than inner surfaces, apical quarter with a fovea, lateral margins of scutellar disc with broken reticulate-rugose sculpture appearing striated (Fig. 174), apex

of disc rounded, surface reticulate-rugose. Propodeal carinae subparallel. Mesopleural carinae complete, meso- and metapleura smooth, polished. Segment 1 of gaster obscured by a ring of dense pubescence at base of tergite 2, complete on dorsal surface, tergites 3+4 partially visible, weakly punctate, hypopygium short, broad basally, ventral spine not visible. Wing surface pubescent, apical margins with a fringe of hairs, radial cell of forewing open on margin, vein R_1 extending partially along margin. Legs normal. Colour: antenna brownish yellow, head, thorax and gaster chestnut-brown, legs yellow.

♂ unknown.

MATERIAL EXAMINED

Holotype ♀, **Zaire**: N. Lac, Kivu, Rwanki, xii.1951 (*J. V. Leroy*) (MRAC).

REMARKS. This species is separated from *atropos* by the relative lengths of the antennal segments.

KLEIDOTOMA Westwood

Kleidotoma Westwood, 1833: 494. Type-species: *Kleidotoma psiloides* Westwood, by monotypy.

Aphyoptera Foerster, 1869: 343. Type-species: *Aphyoptera inustipennis* Foerster, by monotypy. [Synonymised by Hellén, 1960: 23.]

Aphiloptera Foerster, 1869: 351. Type-species: *Aphiloptera anisomera* Foerster, by monotypy. [Synonymised by Quinlan, 1967: 1.]

Agroscopa Foerster, 1869: 352. Type-species: *Agroscopa helgolandica* Foerster, by monotypy. [Synonymised by Quinlan, 1967: 1.]

Nedinoptera Foerster, 1869: 350. Type-species: *Nedinoptera halophila* Thomson, by monotypy. [Synonymised by Quinlan, 1967: 1.]

Rhynchasis Foerster, 1869: 349. Type-species: *Cothonaspis nigra* Hartig, by monotypy. [Synonymised by Quinlan, 1978: 25.]

Pentacrita Foerster, 1869: 349. Type-species: *Cothonaspis retusa* Hartig, by monotypy. [Synonymised by Weld, 1952: 210.]

Tetrahoptra Foerster, 1869: 349. Type-species: *Clidotoma heterotoma* Thomson, by subsequent designation of Ashmead 1903: 62. [Synonymised by Weld, 1952: 207.]

Tetratoma Cameron, 1890 preocc. Type-species: *Kleidotoma heterotoma* Thomson, by subsequent designation of Rohwer & Fagan, 1917: 376.

Schizosema Kieffer, 1901: 161. Type-species: *Cothonaspis emarginatus* Hartig, by subsequent designation of Ashmead, 1903: 62. [Synonymised by Weld, 1931: 233.]

DIAGNOSIS. ♀ antenna 13-segmented, clavate, with 3-segmented club in *psiloides* though a variable number of club segments are found within the genus. ♂ antenna 15-segmented, filiform, segment 3 the largest, curved, swollen at apex. Head, viewed frontally, longer than broad, eyes converging towards malar region, face smooth, polished, with long sparse hairs either side of clypeus, vertex striate. Pronotal plate produced forwards, anterior and posterior parts connected by a medial bridge, foveae on either side of bridge open on lateral margins (Fig. 183). Mesoscutum smooth dorsally, without trace of notaulices; mesopleura smooth, polished, suture complete; scutellar fovea large, deep, smooth, scutellar disc longitudinally striate, scutellar cup long, elliptical, not extending to apex of rounded disc (disc in some species conical or beak-shaped). Segment 1 of gaster obscured by a ring of pubescence at base of tergite 2, not complete on dorsal surface (Fig. 36). Segment 2 the largest in lateral view, segments 3–5 smaller, not always visible, hypopygium with long apical hairs. Wing surface pubescent, radial cell of forewing (Fig. 35), completely open on wing margin, apex of wing either incised (Fig. 177) or truncate (Fig. 196). Legs of normal size and shape. Colour: antenna yellowish, head, thorax and gaster brownish black, gaster chestnut-red, legs yellowish.

DISTRIBUTION. Old and New World.

REMARKS. At present keys to males are difficult to construct. In separating females emphasis has been given to the number of antennal club segments and the relative lengths of the basal flagellar segments. In some specimens the wings can be brachypterous to almost absent, particularly in the males. *K. psiloides* has not been recognised as occurring in the Afrotropical region.

Key to the Afrotropical species of *Kleidotoma* Westwood

Females

- | | | |
|---|--|---|
| 1 | Antenna with 2-segmented club (Fig. 179) | 2 |
| – | Antennal club with 3 or more segments | 3 |

- 2 Antennal segment 2 as long as 3; apex of wing with wedge-shaped incision (Fig. 179); scutellar disc polished, cup long, narrow, not extending to apex of scutellum (Fig. 176); gaster impunctate *morsum* sp. n. (p. 286)
- Antennal segment 2 shorter than 3; apex of wing strongly arcuate (Fig. 208); scutellar disc striate, scutellar cup long, narrow, extending to apex of disc (Fig. 180); apex of tergite 2 and whole of tergite 3 strongly punctate (cf. Fig. 201) *nigrans* sp. n. (p. 286)
- 3 Antenna with 3-segmented club 4
- Antennal club with 4 or more segments 10
- 4 Antennal segments 4–10 longer than wide (Fig. 182); scutellar disc either normally rounded at apex or truncate 5
- Antennal segments 4–10 of varying length, some apical segments, excluding club segments, only as wide as long (Fig. 200); scutellar disc either rounded or spine-shaped apically (Figs 187, 205) 8
- 5 Pronotum laterally and occiput very strongly, densely strigose (Fig. 181); antennal segments 4–10 each progressively shorter, longer than wide, wider apically than basally (Fig. 182); apex of tergite 2 with a broad band of punctures (cf. Fig. 201) *ventosus* sp. n. (p. 288)
- Pronotum either smooth and polished, occiput not strongly strigose, or antenna not as above ... 6
- 6 Antennal segments 4–10 at least more than twice as long as wide, filiform, segment 3 longer than 4+5 (Fig. 188); apex of wing arcuate (Fig. 202) *distenda* sp. n. (p. 283)
- Antennal segments 4–8 at most twice as long as wide, 9–10 not twice as long as wide, segments wider apically than basally 7
- 7 Occiput finely strigose, including area between ocelli (Fig. 183); sides of pronotum striated; tergites 2–4 of gaster visible in lateral view (Fig. 184); scutellar disc with strong and close longitudinal striations, apex of disc almost square, scutellar cup extending to apex of disc (Fig. 185) *erebus* sp. n. (p. 284)
- Occiput smooth, polished; tergites 2–3 of gaster visible in lateral view; scutellar disc with weak, widely spaced longitudinal striations, apex of disc rounded; scutellar cup not extending to apex of disc (Fig. 186) *arbitra* sp. n. (p. 282)
- 8 Scutellar disc strongly produced apically to form a long, blunt, truncated spine.
Scutellar cup elliptical, lateral margins of scutellar disc striate; head strongly sculptured in frontal region, occiput strigose; sides of pronotal plate and mesoscutum with striate sculpture *conica* sp. n. (p. 283)
- Scutellar disc rounded apically, not produced to form a spine 9
- 9 Antennal segments 5–8 almost quadrate (Fig. 189), same width apically as basally
strigosa sp. n. (p. 287)
- Antennal segments 4–6 longer than wide (Fig. 190), 7–10 as wide as long, conical, wider apically than basally *favus* sp. n. (p. 285)
- 10 Antenna with 4-segmented club 11
- Antennal club with 5 or more segments 12
- 11 Antennal club sharply defined (Fig. 191); apex of segment 2 and whole of visible parts of segments 3 and 4 of gaster densely punctate (cf. Fig. 184); hypopygium strongly protruding
nitidiuscula sp. n. (p. 287)
- Antennal club not sharply defined, almost filiform (Fig. 192); gaster weakly punctate; hypopygium not protruding *fimbriata* sp. n. (p. 285)
- 12 Antenna with 5-segmented club, first segment of club distinctly smaller than four apical segments (Fig. 193) *eala* sp. n. (p. 283)
- Antennal club with 6 or more segments 13
- 13 Antennal club 6-segmented 14
- Antennal club 7-segmented, not sharply defined, almost filiform (Fig. 195).
Scutellar disc normally rounded apically, polished, with very weak striations (Fig. 194); apex of wing truncate (Fig. 196) *norma* sp. n. (p. 287)
- 14 Scutellar disc bifurcate at apex (Fig. 197), strongly striated laterally, apex of wing sharply incised (Fig. 198) *bifurcata* sp. n. (p. 282)
- Scutellar disc normally rounded at apex, polished, with weak striations laterally; apex of wing weakly arcuate (cf. Fig. 202) *elongula* sp. n. (p. 284)

***Kleidotoma arbitra* sp. n.**

(Figs 175, 186, 204)

DESCRIPTION. ♀. Antenna 13-segmented with a distinct 3-segmented club, club segments with rhinaria, each wider and longer than preceding flagellar segments, segment 3 subequal in length to 4+5, segments 4–10 each longer than broad (Fig. 204). Head, viewed frontally, smooth, polished, with a few scattered hairs medially, eyes small, round, further apart measured medially than height of an eye, malar groove complete, anterior and tentorial pits distinct, occiput smooth, shining, pronotal plate projected forward, anterior and posterior parts connected by a medial bridge, foveae either side of bridge open on lateral margins. Pronotum either side of pronotal plate polished; mesopleura smooth, polished, suture distinct, mesoscutum smooth, polished, notaulices absent, scutellar disc striate on lateral margins, apex of disc rounded, scutellar cup long, elliptical, not extending to apex of disc, apex of cup with a large fovea, lateral bars of scutellum smooth on dorsal surface, striate laterally, scutellar foveae large, smooth, shallow, separated by narrow septum of cup (Fig. 186). Segment 1 of gaster obscured by a dense ring of hairs at base of tergite 2, not complete on dorsal surface, apex of tergite 2 smooth, polished, without punctures, tergite 3 visible laterally (Fig. 175). Wings pubescent on surface, radial cell of forewing completely open on margin, vein *Rs*₂ extended along wing margin, cell triangular, apex of wing arcuate with a long apical hair fringe. Colour: segments 1–10 of antenna dark yellow, 11–13 brownish yellow, head, thorax and gaster dark chestnut-red, coxae yellow with brownish apices, basal half of femora light brown, apex yellow, tibiae and tarsi dark yellow.

♂ unknown.

MATERIAL EXAMINED

Holotype ♀, **South Africa**: Mossel Bay, Cape Province, x.1921 (*R. E. Turner*) (BMNH).Paratypes. **South Africa**: 6 ♀ (BMNH). **Uganda**: 1 ♀ (BMNH). **Zaire**: 19 ♀ (MRAC). **Zimbabwe**: 8 ♀ (BMNH).

REMARKS. This species resembles *psiloides*, the Palaearctic species associated with *Leptocera manicta* Richards, but can be separated by the polished occiput.

***Kleidotoma bifurcata* sp. n.**

(Figs 197, 198, 199, 201)

DESCRIPTION. ♀. Antenna 13-segmented, clavate with a 6-segmented club, not sharply indicated, club segments with rhinaria, segment 3 longer than 4, 4–7 each progressively shorter than each other, club segments 8–13 subequal, all longer than segment 7. Head, viewed frontally, with coriaceous sculpture on inner orbits, eyes twice as far apart measured medially than height of an eye, striations extending from lower margin of eye towards clypeal area, malar grooves obscured by striations, occiput strongly strigose. Pronotal plate, viewed dorsally, sculptured on anterior surface, polished on posterior surface, medial foveae open on lateral margins (Fig. 199). Pronotum either side of pronotal plate striated. Mesoscutum finely coriaceous except for a polished area where parallel lines would be, if present, lateral bars of scutellum strongly striated, scutellar disc strongly striate, apex of disc truncated, with a blunt spine on either side (Fig. 197), scutellar cup long, elliptical, bulbous apically, with large central fovea, scutellar foveae large, deep, polished. Mesopleura smooth, polished, suture pronounced (carina-like on lower margin, suture-like on upper margin), with coriaceous sculpture above and below, area below precoxal carina pubescent. Lateral margins of propodeum pubescent. Segment 1 of gaster obscured by a dense ring of pubescence, complete on dorsal surface, apex of tergites 2 and 3 with dense punctures, hypopygium pronounced (*cf.* Fig. 201). Wing surface with dotted hair bases, with apical hair fringe, apex of wing incised, radial cell of forewing open on margin (Fig. 198). Colour: antenna yellowish brown basally, club blackish brown, head and thorax blackish, gaster blackish brown dorsally, reddish yellow laterally, legs yellow brown.

♂ unknown.

MATERIAL EXAMINED

Holotype ♀, **Zaire**: Rweru (Volc. Mikeno), 2,400 m (Bambous), 26–27.vii.1934 (*G. F. de Witte*) (MRAC).

Paratype. 1 ♀, same data as holotype except 3.vii.1934 (BMNH).

REMARKS. This species cannot be confused with any other described in this paper. Apart from the shape of the head, the exceedingly distinctive shape of the entire scutellar area (Fig. 197) singles it out from all other species.

***Kleidotoma conica* sp. n.**

(Figs 187, 200, 201)

DESCRIPTION. ♀. Antenna 13-segmented with the three apical segments forming a distinct club (Fig. 200), segments 4–10 each progressively shorter than preceding segment, apical width of each wider than basal breadth. Head, viewed frontally, strongly striated in frontal area below ocellus, malar grooves complete, clypeus with long scattered hairs, occiput strongly striated. Pronotal plate with lateral fovea open, striated. Pronotum and side margins of mesoscutum striated. Scutellar disc tapering to a blunt conical beak at apex, striate laterally, reticulate apically, lateral bars of scutellum striated, scutellar foveae large, shallow, polished, scutellar cup obscure (Fig. 187). Mesopleural suture distinct, with tuft of pubescence on anteroventral cavity. Gaster lenticular in shape, segment 1 obscured by a dense ring of pubescence at base of tergite 2, apex of tergite 3 with scattered punctures, 4 punctate, hypopygium short (Fig. 201). Wing surface with dotted hair bases, apical margins arcuate, with a hair fringe, radial cell of forewing open on margin, Rs_2 weakly extended along margin. Colour: antenna and legs dark yellow, first antennal segment and coxae dark brown, head and thorax black, gaster dark chestnut-red.

MATERIAL EXAMINEDHolotype ♀, **Zaire:** 2.i.1952 (*H. de Saeger*) (MRAC).Paratype. **Zaire:** 1 ♀ (MRAC).

REMARKS. A very distinctive species. The very long, truncated, spine-like projection of the scutellar disc and the strongly striated upper regions of the face distinguish it from all known species. The radial cell of the forewing is typical of *Kleidotoma* in shape, and the apex of the wing is weakly arcuate.

***Kleidotoma distenda* sp. n.**

(Figs 188, 199, 202)

DESCRIPTION. ♀. Antenna 13-segmented with apical three segments forming a distinct club, segments 3–10 at least $3 \times$ as long as broad (Fig. 188). Head, viewed frontally, smooth, polished, malar grooves distinct, eyes oval, further apart measured medially than height of an eye, occiput very weakly sculptured; pronotal plate weakly sculptured with a large fovea on either side of medial bridge, open laterally (*cf.* Fig. 199). Pronotum either side of pronotal plate smooth. Mesopleura smooth, shining, suture distinct; scutellar disc with weak broken sculpture to fine striations on lateral margins, apex rounded, weakly sculptured, scutellar cup long, narrow, not reaching apex of disc, scutellar foveae large, shining, separated by a wide septum at base of cup, lateral bars of scutellum smooth, shining. Segment 1 of gaster obscured by a moderately hairy ring at base of tergite 2, gaster impunctate. Wings densely pubescent, arcuate apically, with fringe of hairs, radial cell of forewing completely open on margin, cell triangular (Fig. 202). Colour: segments 1–10 of antenna brownish yellow, 10–13 brown, head dark brown, thorax and gaster chestnut-brown, legs yellow, hind coxa with longitudinal sculpture of varying degree.

♂ unknown.

MATERIAL EXAMINEDHolotype ♀, **South Africa:** Mossel Bay, Cape Province, 5–31.vii.1921 (*R. E. Turner*) (BMNH).Paratypes. **Nigeria:** 6 ♀ (BMNH). **South Africa:** 11 ♀ (BMNH). **Zaire:** 28 ♀ (MRAC).

REMARKS. Distinguished from *arbitra* by antennal segments 4–10, each being twice as long as wide.

***Kleidotoma eala* sp. n.**

(Figs 193, 194)

DESCRIPTION. ♀. Antenna 13-segmented with a distinct 5-segmented club, segment 2 shorter than 3 but broader than 3, segment 3 subequal to 4+5 in length, 4 shorter than 5, 5–7 subequal, club segments 9–13 distinctly wider than segments 3–8 (Fig. 193). Pronotal plate small with a large fovea on either side of medial bridge, open laterally; pronotum either side of pronotal plate with tufts of pubescence, mesoscutum smooth, polished, scutellar disc weakly conical at apex, lateral margins either side of scutellar cup weakly striate, scutellar cup long, narrow, elliptical, scutellar foveae large, shallow (*cf.* Fig. 194), lateral bars of scutellum smooth, polished, extending past centre of cup. Mesopleura smooth, polished, suture distinct; propodeum with tufts of pubescence on lateral margins. Segment 1 of gaster obscured by dense ring of pubescence at base of tergite 2, not complete on dorsal surface, 2–4 visible in lateral view, punctate,

hypopygium clearly visible in lateral view, not extending past apex of sheath. Wings pubescent on surface, apical margin weakly arcuate, with fringe of hairs, radial cell of forewing completely open on wing margin. Colour: antenna pale yellow, head, thorax and gaster dark brownish red, legs pale yellow.

♂ unknown.

MATERIAL EXAMINED

Holotype ♀, **Zaire**: Kivu, Kalondalac Ndaraga Mokotol, 1,750 m, 22–27.iii.1934 (*G. F. de Witte*) (MRAC).

REMARKS. Distinguished from other species by the 5-segmented club.

Kleidotoma elongula sp. n.

(Figs 180, 203, 207)

DESCRIPTION. ♀. Antenna 13-segmented, the apical 6 segments with rhinaria and forming a weak club, segment 2 shorter and broader than 3, 3 longer than 4, 4–7 subequal in length and breadth, cylindrical, 8–13 each longer than 7, wider medially than at either end (Fig. 203). Head, viewed frontally, smooth, polished, eyes further apart measured medially, than height of an eye, frontal area with scattered hairs, malar grooves percurrent, anterior tentorial pits distinct, occiput smooth. Pronotal plate small, with foveae on either side of medial bridge open (*cf.* Fig. 207). Mesoscutum smooth, polished; scutellar disc rounded at apex, very weakly striated on lateral margins, scutellar cup long, elliptical, with a large fovea on apical half, scutellar foveae large, lateral bars of scutellum smooth, shining, short (*cf.* Fig. 180). Mesopleural suture distinct, sterno-pleural suture distinct; propodeum with weak pubescence at base of tergite 2, complete on dorsal surface, tergite 2 the largest in lateral view, segment 3 partially visible in lateral view, gaster impunctate, hypopygium visible, not extending past apex of sheath. Wing surface densely pubescent, apex of wing arcuate, with a fringe of hairs, radial cell of forewing completely open on wing margin. Colour: antenna pale yellow, head, thorax and gaster dark brownish red, legs pale yellow.

♂ unknown.

MATERIAL EXAMINED

Holotype ♀, **South Africa**: Mossel Bay, Cape Province, x.1921 (*R. E. Turner*) (BMNH).

Paratypes. **Zaire**: 1 ♀ (MRAC). **Zimbabwe**: 1 ♀ (BMNH).

REMARKS. This species is distinguished by the filiform antenna, and the six apical segments which are very weakly clavate and bear rhinaria (Fig. 203).

Kleidotoma erebus sp. n.

(Figs 182, 183, 184, 185, 198)

DESCRIPTION. ♀. Antenna 13-segmented, the apical 3 segments forming a distinct club, segment 3 1.5 × length of 4, 4–7 subequal in length, 8–10 almost as wide apically as long (*cf.* Fig. 182). Head, viewed frontally, smooth, polished, eyes oval, as far apart measured medially as height of an eye, inner orbits with a carina partially extending from outer area of antennal scrobe, malar grooves percurrent, anterior tentorial pits distinct, lower face with sparse setae extending to clypeal region, occiput strongly strigose. Pronotal plate projected forward, anterior and posterior parts joined medially by a broad bridge, fovea either side of bridge open laterally, with sparse pubescence (Fig. 183). Pronotum with striations either side of pronotal plate. Mesoscutum smooth, polished, lateral bars of scutellum striate, scutellar foveae large and deep apically, scutellar cup long, narrow, extending to apex of scutellar disc, apex of disc viewed dorsally almost square (Fig. 185). Mesopleura smooth, polished, carina complete, metapleura ridged above hind coxa; propodeum pubescent dorsally and laterally. Segment 1 of gaster obscured by a ring of hairs at base of tergite 2, tergite 2 the largest in lateral view, 3 and 4 partially visible, apex of tergite 2 and visible parts of 3 and 4 punctate, hypopygium not pronounced (Fig. 184). Wing surface pubescent, radial cell of forewing open on margin, *Rs*₂ partially extending along margin, apex of wing incised, with a fringe of hairs (Fig. 198); legs of normal proportions. Colour: antenna yellowish basally, club segments darker, head, thorax and gaster chestnut-red, legs orange-yellow.

♂ unknown.

MATERIAL EXAMINED

Holotype ♀, **Zaire**: N. Lac Kivu, Rwanki, 15.ii.1952 (*J. V. Leroy*) (MRAC).

Paratypes. **Zaire**: 3 ♀ (MRAC).

REMARKS. Similar to *arbitra* in many respects but differing by the sculpture of the occiput and the shape of the scutellar disc.

***Kleidotoma favus* sp. n.**

(Figs 183, 190, 199, 205)

DESCRIPTION. ♀. Antenna 13-segmented with a distinct 3-segmented club, club segments with rhinaria, wider and longer than preceding flagellar segments, segment 3 as long as 4+5, segments 4–10 as wide apically as long, some obconical (Fig. 190). Head, viewed frontally, smooth, polished, eyes small, almost round, further apart measured medially than height of an eye, malar grooves percurrent, anterior tentorial pits distinct. Pronotal plate, viewed dorsally, with a large fovea on either side of medial bridge, not pubescent, surface reticulate-rugose (cf. Fig. 199). Pronotum on dorsal and side margins at juncture with mesoscutum canaliculate-striate (cf. Fig. 183). Mesopleura smooth, shining, suture distinct. Mesoscutum smooth, polished, scutellar disc with strong striate sculpture on lateral margins, apex irregularly rounded, rugose, lateral bars of scutellum strongly striate, scutellar fovea large, shallow, polished, separated by septum of scutellar cup, scutellar cup long, narrow, not extending to apex of scutellar disc, with a fovea on apical half (Fig. 205). Segment 1 of gaster obscured by a dense ring of pubescence at base of tergite 2, tergite 2 the largest in lateral view, 3 and 4 partially visible, impunctate. Wing surface with dotted hair bases, radial cell of forewing completely open on margin, apex of wings incised, with apical hair fringe. Colour: antenna yellow at apex, becoming darker apically, head and thorax dark reddish black, gaster chestnut-red-brown, legs orange-yellow.

♂. Antenna 15-segmented, filiform, segment 3 curved, swollen distally.

MATERIAL EXAMINED

Holotype ♀, **Cameroun**: Nkoemvon, 1980 (*D. Jackson*) (BMNH).

Paratypes. **Cameroun**: 3 ♀, 2 ♂ (BMNH). **Kenya**: 12 ♀, 2 ♂ (BMNH). **Nigeria**: 1 ♀ (BMNH). **Uganda**: 2 ♀ (BMNH). **Zaire**: 44 ♀ (MRAC). **Zimbabwe**: 17 ♀, 15 ♂ (BMNH).

REMARKS. This species closely resembles *strigosa* but is separated by the flagellar segments of the antenna preceding the club.

***Kleidotoma fimbriata* sp. n.**

(Figs 192, 205, 206)

DESCRIPTION. ♀. Antenna 13-segmented, almost filiform, club 4-segmented, not sharply defined, all with rhinaria, segment 3 clearly longer than 4 (Fig. 192), 4–9 almost subequal in length, the apical segments slightly progressively shorter than each preceding segment, club segments 10–13 subequal to each other, each longer than segment 9 and weakly swollen medially. Head, viewed frontally, smooth, polished, malar grooves distinct, eyes further apart measured medially than height of an eye, clypeus and area above with scattered pubescence, occiput striated. Pronotal plate projected forward, anterior part sculptured, posterior part polished; lateral bars and scutellar disc with coarse striations, scutellar cup elliptical, apex of disc rounded (cf. Fig. 205), scutellar foveae large, polished. Mesopleural suture distinct. Segment 1 of gaster obscured by a ring of dense pubescence at base of tergite 2, apex of tergite 2 and visible part of 3 with sparse punctures, hypopygium not protruding (Fig. 206). Wing surface pubescent, apex of wings incised, with a long fringe of hairs, radial cell of forewing open on wing margin. Colour: antenna brownish yellow, head and thorax black, gaster reddish brown, legs orange-yellow.

♂ unknown.

MATERIAL EXAMINED

Holotype ♀, **Zaire**: Ruanda, Kibga, Volc. Bishoke, 2,400 m, 8–9.xi.1935 (*G. F. de Witte*) (MRAC).

Paratypes. **Zaire**: 3 ♀ (MRAC).

REMARKS. This species has almost filiform antenna and an impunctate gaster, distinguishing it from *nitidiuscula*.

***Kleidotoma montana* Kieffer**

Kleidotoma montana Kieffer, 1910c: 107. Holotype ♀, RWANDA: Vulkan Karishimbi, 2,700 m, xi. (Exped. Herzog Adolf Friedrich zu Mecklenburg).

The holotype of this species cannot be traced. In his description Kieffer indicates that the club of the

antenna is 3-segmented, flagellar segments 4–10 quadrate, head smooth, polished. The scutellar cup is not mentioned in the description. In his figure of the whole insect, the wings have an apical fringe of hairs and are indented apically. Tergite 2 of the gaster has a ring of hairs at the base and appears complete on the dorsal surface; segments 2–5 are visible in lateral view. The drawing does not indicate whether or not any segments of the gaster are punctate, and the mesopleural suture is not indicated. The radial cell of the forewing is typical for *Kleidotoma*. A female from Zaire, Ruanda, Contrefort Est. Muhavura, 2,100 m, 28.i.1953 (*P. Basilewsky*), and determined by Benoit as *montana*, is in MRAC but cannot be accepted as this species. From the description and figure I am unable to recognise *montana* and regard it as incertae sedis. The figure indicates that the antennal segments 4–10 are quadrate as in *strigosa*.

Kleidotoma morsum sp. n.

(Figs 176, 177, 179, 207)

DESCRIPTION. ♀. Antenna 13-segmented, segment 2 as long as 3 and twice as wide, segment 3 as long as 4+5, 4 and 5 subequal, segments 6–11 subequal, short, wider than long, obconical, 12–13 forming a 2-segmented club, both with rhinaria present (Fig. 179). Head, viewed frontally, smooth, polished, eyes small, round, further apart measured medially than height of an eye, malar grooves weakly indicated. Pronotal plate projecting, weakly crenulate, lateral fovea open (Fig. 207). Mesoscutum smooth, polished, scutellar disc sharply conical at apex, lateral margins smooth, shining, without striations, scutellar cup narrow, elliptical, with a large fovea at apex (Fig. 176), lateral bars of scutellum smooth, shining, extending just past scutellar foveae, scutellar foveae small, deep. Mesopleural suture distinct. Segment 1 of gaster obscured by a ring of dense pubescence at base of tergite 2, hypopygium weakly visible, apex of tergite 2 without punctures, gaster lenticulate. Wing surface without pubescence, dotted hair bases present, apex of wing strongly incised, apical hair fringe long, radial cell of forewing completely open on margin (Fig. 177). Colour: antennal segments 1–11 dark yellow, 12–13 brownish yellow, head, thorax and gaster dark brownish red, legs yellow.

♂ unknown.

MATERIAL EXAMINED

Holotype ♀, **South Africa**: Port St. John, Pondoland, 15–31.v.1923 (*R. E. Turner*) (BMNH).

Paratypes. **Zaire**: 6 ♀ (MRAC).

REMARKS. Distinguished from the closely related *nigrans* by the elongate antennal segment 2, the wedge-shaped incision of the apical margin of the forewing, the polished scutellar disc and impunctate gaster.

Kleidotoma nigrans sp. n.

(Figs 178, 180, 207, 208)

DESCRIPTION. ♀. Antenna 13-segmented, segment 2 shorter than 3 and twice as wide, segment 3 as long as 4+5, slightly longer than 5, 5–9 each longer than broad and subequal to each other, 10 and 11 equal in length, shorter than 9, 12 and 13 forming a distinct club, both with rhinaria, club segments 12–13 together as long as segments 6–11 combined (Fig. 178). Head viewed frontally longer than wide, eyes further apart measured medially than height of an eye, mandibles large tridentate, with a few hairs in clypeal region, malar grooves distinct, occiput weakly sculptured. Pronotal plate small, projected forwards viewed frontally, ventral surface sculptured, lateral fovea either side of medial bridge open (*cf.* Fig. 207). Mesoscutum smooth, polished, suture distinct; scutellar disc rounded at apex, lateral margins with obsolete striate sculpture, shiny, scutellar fovea large, squarish, scutellar cup narrow, elliptical, with a large fovea apically (Fig. 180), lateral bars of scutellum short, weakly sculptured. Segment 1 of gaster obscured by a ring of pubescence at base of tergite 2, incomplete on dorsal surface, gaster lenticular, punctate, tergite 3 partially visible in lateral view. Wing surface dotted with hair bases, radial cell of forewing completely open on wing margin, apex of wing sharply incised, with apical hair fringe (Fig. 208). Colour: segments 1–11 of antenna dark brownish yellow, club segments 12 and 13 black, head, thorax and gaster chestnut-brown, legs clear yellow.

♂ unknown.

MATERIAL EXAMINED

Holotype ♀, **Zaire**: Terr. Rutshuru, 7.iv.1937 (*Mission Prophylactique*) (MRAC).

Paratype. **Zaire**: 1 ♀, same data as holotype except 4.iv.1934 (MRAC).

REMARKS. Closely related to *morsum* but separated from it by a number of characters, particularly the striations of the scutellar disc, the elongate cup which extends to the apex of the disc, and the short antennal segment 2.

***Kleidotoma nitidiuscula* sp. n.**

(Figs 191, 201, 209, 210)

DESCRIPTION. ♀. Antenna 13-segmented, segment 2 shorter than 3, 3 twice length of 4, equal to 4+5, 5 and 6 subequal in length, 7 and 8 subequal, slightly shorter than 6, 9 longer than 8, broader at base, 10–13 forming a 4-segmented club, club segments with rhinaria, segment 10 $1.2 \times$ length of 9, 11 and 12 equal in length, 13 slightly longer than 12 (Fig. 191). Face, viewed frontally, smooth, polished, malar grooves percurrent, eyes further apart measured medially than height of an eye, occiput with strong strigose sculpture. Pronotal plate projected forward, viewed dorsally, sculptured on basal half and hind margin of apical half, fovea on lateral margins open (Fig. 209); side margins of pronotum adjacent to pronotal plate sculptured, scutellar disc truncate at apex, strongly striate on lateral margins, scutellar cup long, narrow, elliptical, extending to apex of disc or beyond, lateral bars of scutellum striate on lateral margins, dorsal surface smooth, shining, scutellar foveae large, deep, shiny. Mesopleura smooth, polished, suture distinct. Segment 1 of gaster obscured by a dense ring of pubescence at base of tergite 2, tergites 2–4 visible in lateral view, apex of 2 and visible parts of 3 and 4 densely punctate (cf. Fig. 201), hypopygium not prominent. Wing surfaces with dotted hair bases, apex of forewing sharply incised, with apical hair fringe, radial cell of forewing completely open (Fig. 210). Colour: antennal segments 1–9 dark yellow, 10–13 brownish, head and thorax black, gaster reddish basally, black on dorsal and lateral surfaces, legs dark yellow.

♂ unknown.

MATERIAL EXAMINED

Holotype ♀, **Zaire**: '(Congo Belge PN.G.) Miss.II De Saeger, ii/Fd/17, 15.ix.1951. (Rec.H. de Saeger)' (MRAC).

REMARKS. This species is very similar to *fimbriata* but is distinguished by the sharply defined club segments and dense punctuation of the gaster.

***Kleidotoma norma* sp. n.**

(Figs 194, 195, 196, 211)

DESCRIPTION. ♀. Antenna 13-segmented, filiform, segment 3 longer than 4, 4–6 subequal in length, 7–13 forming a weak club, distinguished by presence of rhinaria and the slight medial swelling of each segment, club segments 7–12 a little longer than preceding flagellar segments, segment 13 $1.3 \times$ length of 12 (Fig. 195). Face, viewed frontally, smooth, polished, area above clypeus raised, malar grooves percurrent, anterior tentorial pits large, clypeal margin with long sparse setae, occiput smooth, shiny, with broken sculpture. Pronotal plate projected forward, viewed dorsally, sculptured on anterior part, fovea either side of medial bridge open on lateral margins (Fig. 211). Pronotum either side of pronotal plate smooth, polished. Mesoscutum smooth, polished, with a few long scattered hairs; lateral bars of scutellum and scutellar disc very weakly striated, scutellar foveae smooth, polished, scutellar cup elliptical, apex of disc rounded (Fig. 194). Mesopleural suture distinct, lower part of pronotum adjacent to mesopleura striated, area below precoxal carina pubescent. Segment 1 of gaster obscured by a ring of dense pubescence at base of tergite 2, tergites 2 and 3 impunctate, hypopygium not protruding. Wing surfaces densely pubescent, truncate at apex which has an apical fringe of hairs, radial cell of forewing completely open on margin (Fig. 196). Colour: antenna brownish, head and thorax black, gaster blackish brown, legs orange-yellow.

♂ unknown.

MATERIAL EXAMINED

Holotype ♀, **Zimbabwe**: Chishawasha, nr Salisbury, x.1979 (*A. Watsham*) (BMNH).

REMARKS. This species is separated by the inconspicuous 7-segmented club, which is almost filiform, and the presence of rhinaria on each club segment.

***Kleidotoma strigosa* sp. n.**

(Figs 183, 189, 205, 211, 212)

DESCRIPTION. ♀. Antenna 13-segmented with a distinct 3-segmented club, each segment broader and

longer than preceding flagellar segments, segment 3 as long as 4+5, segment 4 slightly longer than broad, 5–10 quadrate, as wide as long, apical and basal widths equal (Fig. 189). Head viewed frontally smooth, polished, malar grooves percurrent, eyes round, further apart measured medially than height of an eye, occiput with weak strigose sculpture. Pronotal plate, viewed dorsally, large, projected forward, fovea either side of medial bridge large, open on lateral margins, with tufts of pubescence (*cf.* Fig. 211). Pronotum on side margins at juncture with mesoscutum and pronotal plate strigose (*cf.* Fig. 183). Mesoscutum smooth, polished, scutellar disc with widely spaced longitudinal striations, apex elongate, rounded, reticulate, scutellar cup narrow, elliptical, not extending to apex of disc, apex of cup with a large fovea, lateral bars of scutellum short, striate, as long as scutellar foveae which are deep and separated by broad septum of cup (*cf.* Fig. 205). Mesopleura smooth, polished, suture distinct. Segment 1 of gaster obscured by a ring of dense pubescence, apex of tergite 2 and visible segments impunctate, hypopygium pronounced. Wing surface with very short pubescence, apex of wing strongly arcuate, with apical hair fringe, radial cell of forewing completely open on wide margin (Fig. 212). Colour: antenna dark reddish brown, head and thorax blackish red, coxae brownish red, femora, tibiae and tarsi brownish yellow.

♂. Antenna 15-segmented, flagellar segments 4–10 as broad as long.

MATERIAL EXAMINED

Holotype ♀, **Cameroun**: Nkoemvon, 1980 (*D. Jackson*) (BMNH).

Paratypes. **Cameroun**: 5 ♀, 2 ♂ (BMNH). **Kenya**: 11 ♀, 12 ♂ (BMNH). **Nigeria**: 1 ♀ (BMNH). **Uganda**: 2 ♀ (BMNH). **Zaire**: 42 ♀ (MRAC). **Zimbabwe**: 17 ♀ (BMNH).

REMARKS. A distinctive species, the quadrate flagellar segments 5–10 separate it from the closely related *favus*.

Kleidotoma ventosus sp. n.

(Figs 181, 182, 186, 210, 211)

DESCRIPTION. ♀. Antenna 13-segmented with a distinct 3-segmented club, club segments each broader and longer than the preceding flagellar segments, segment 3 subequal to 4+5, flagellar segments 4–11 each progressively shorter than each other, longer than wide, wider apically than basally (Fig. 182). Head, viewed frontally, smooth, polished, malar grooves complete, eyes almost round, further apart measured medially than height of an eye. Pronotal plate, viewed dorsally, protruding, with large fovea on either side of medial bridge, open laterally, smooth, shining (*cf.* Fig. 211). Pronotum on side margins at junction with mesoscutum and pronotal plate strongly canaliculate (Fig. 181). Mesopleural suture distinct, with fine reticulate sculpture below suture. Mesoscutum smooth, polished; scutellar disc striate, apex of disc rounded, reticulate, scutellar cup long, narrow, elliptical, not reaching apex of disc, apex of cup with a large fovea, lateral bars of scutellum strongly striate, scutellar foveae large, polished, with narrow septum of cup separating them (*cf.* Fig. 186). Segment 1 of gaster obscured by a ring of dense pubescence at base of tergite 2, apex of tergite 2 and visible parts of tergites 3 and 4 punctate. Wing surfaces dotted with hair bases, apex of wing sharply incised with apical hair fringe, radial cell of forewing completely open on wing margin, vein Rs_2 weakly extending along margin of wing (Fig. 210). Colour: segments 1–10 of antenna dark yellow, club segments 11–13 brown, head dark brown-black, thorax black, except for propodeum and metapleura which are dark yellow-orange, legs dark yellow.

♂ unknown.

MATERIAL EXAMINED

Holotype ♀, **South Africa**: Port St John, Pondoland, 1–5.iv.1923 (*R. E. Turner*) (BMNH).

Paratypes. **Ethiopia**: 1 ♀ (BMNH). **South Africa**: 3 ♀ (BMNH). **Zaire**: 4 ♀ (MRAC).

REMARKS. The length of the antennal segments and the densely strigose occiput distinguish this species.

NORDLANDERIA gen. n.

Type-species: *Nordlanderia plowa* sp. n.

DIAGNOSIS. ♀ antenna 13-segmented, clavate, with 8–9 club segments, ♂ antenna 15-segmented, filiform, segment 3 $1.5 \times$ length of 4, weakly curved, swollen distally. Head, viewed frontally, with eyes slightly further apart measured medially than height of an eye, inner margins almost parallel, malar space with a subocular suture, a few radiating striae on either side, supraclypeal area and anterior region of face with short protrusions (Fig. 16). Pronotal plate not protruding, very weakly indicated (Fig. 223), lateral fovea either side of median bridge open. Mesoscutum with or without notaulices, if present, very weakly

indicated, converging sharply towards scutellum, scutellar foveae obsolete. Mesopleural suture complete, area below suture sculptured (Fig. 214). Propodeal carinae bowed, medial area polished, with tufts of pubescence on either side. Gaster with segment 1 almost obscured, base of tergite 2 partially enclosing it, when visible, short and broad, in the form of a weakly sculptured ring, tergite 2 the largest, occupying whole area of gaster viewed laterally, smooth, polished (Fig. 13). Wing surfaces pubescent, with ciliate margins, longest at apex, forewing with a closed radial cell although this can appear open in some specimens. Legs short, broad, coxae with scattered hairs, femora, tibiae and tarsi moderately pubescent.

DISCUSSION. *Nordlanderia* has close affinities with *Microstilba* Foerster, but differs in having pronounced triangular projections on the face and the notaulices almost absent. In those species where they are present they converge posteriorly towards the scutellum at a point almost mid-way between the pronotum and the scutellum. As with most eucilids, the males are difficult to key and separate to species.

DISTRIBUTION. Afrotropical Region.

Key to the species of *Nordlanderia* gen. n.

Females

- 1 Hypopygium prominent, with long apical hairs (Fig. 222), segments 2–4 of gaster visible in lateral view..... *acis* sp. n. (p. 289)
- Hypopygium not prominent (Figs 215, 220), hairs sparse, segments 2–3 only of gaster visible in lateral view..... 2
- 2 Antennal club 8-segmented, segment 3 longer than 4 (Fig. 216); notaulices complete though very weakly indicated (Fig. 218); head, thorax and gaster black..... *plowa* sp. n. (p. 290)
- Antennal club 9-segmented, segments 3 and 4 of equal length; notaulices aberrant, almost absent anteriorly (Fig. 217); head and thorax black, gaster orange-yellow.... *pallida* sp. n. (p. 289)

Nordlanderia acis sp. n.

(Figs 214, 217, 219, 221, 222, 223)

DESCRIPTION. ♀. Antenna 13-segmented, weakly clavate, club 8-segmented, segment 3 $1.2 \times$ length of segment 4 (Fig. 219). Head, viewed frontally, smooth, polished, frons raised, malar grooves percurrent with striations on either side of them, cheeks below grooves extruded to form three tooth-like appendages (Fig. 221), eyes weakly converging, frontal area raised. Pronotal plate not projected, anterior and posterior parts connected by a medial bridge, with fovea on lateral margins open (cf. Fig. 223). Mesoscutum smooth, polished, notaulices very weakly represented, almost absent in some specimens, converging sharply towards scutellum, lateral bars of scutellum polished, scutellar cup slightly longer than wide, with a large apical fovea, scutellar disc with widely spaced radiating striae or ridges, scutellar foveae aberrant (Fig. 217). Mesopleural suture complete, area below suture coriaceous (cf. Fig. 214); propodeal carinae parallel, converging at base towards gaster, lateral margins densely pubescent. Segment 1 of gaster not completely visible in lateral view, in the form of a ring, tergites 2–3 visible in lateral view, hypopygium pronounced (Fig. 222). Wing surface pubescent, apical margins with a hair fringe, radial cell of forewing completely closed on wing margin, longer than wide. Legs normal, moderately pubescent. Colour: antenna yellow basally, apical segments darker, legs orange-yellow, head and thorax chestnut-brown, gaster lighter.

♂. Antenna 15-segmented; segment 3 longer than 4, curved, swollen distally.

MATERIAL EXAMINED

Holotype ♀, **Namibia**: Swakopmund, 26–30.i.1972 (BMNH).

Paratypes. **South Africa**: 31 ♀, 45 ♂ (BMNH).

REMARKS. This species is easily distinguished from others by the prominent hypopygium (Fig. 222).

Nordlanderia pallida sp. n.

(Figs 213, 217, 220, 223)

DESCRIPTION. ♀. Antenna 13-segmented, weakly clavate, with a weak 9-segmented club, segment 3 equal in length to segment 4. Head viewed frontally with scattered hairs between eyes, malar space with subocular suture distinct, with striae on either side of sutures, supraclypeal area and anterior region of face with three strongly projecting spine-shaped keels (cf. Fig. 213). Pronotal plate not projected forward, almost aberrant, not prominent, anterior and posterior parts connected by a medial bridge with an open

fovea on either side of bridge (Fig. 223). Mesoscutum smooth, polished, with only the faintest indication of notaulices, sometimes virtually absent (Fig. 217); scutellar cup large, concave basally, rim of cup almost level with apex of scutellar disc which has radiating sculpture (Fig. 217). Mesopleural suture complete, area below suture coriaceous. Propodeal carinae weakly bowed, almost parallel, median area smooth, polished, sides of propodeum with tufts of pubescence. Segment 1 of gaster obscured by base of tergite 2, viewed laterally, in form of a thin ring, tergite 2 the largest, occupying whole of lateral surface of gaster (Fig. 220). Wing surface pubescent, with a long apical hair fringe, radial cell of forewing closed on margin. Legs with narrow coxae, femora, tibiae and tarsi moderately pubescent. Colour: antenna yellow, legs yellow, head and thorax black, gaster reddish yellow.

♂. Antenna filiform, segment 3 longer than 4, weakly curved, flattened medially on inner margin or surface.

MATERIAL EXAMINED

Holotype ♀, **South Africa**: Pretoria, i.1931 (*N. E. Munro*) (BMNH).

Paratypes. **Ghana**: 1 ♀, Accra, vi.1921 (*I. Ingram*) (BMNH), 1 ♀, 2 ♂, Irat (GERDAT).

REMARKS. This species is closely related to *plowa* but can be separated by the antennal characters and the absence of notaulices.

Nordlanderia plowa sp. n.

(Figs 213, 216, 218, 223)

DESCRIPTION. ♀. Antenna 13-segmented, clavate, with a weakly defined 8-segmented club, segment 3 1.5 × length of 4 (Fig. 216). Head, viewed frontally, with scattered hairs between eyes which are almost parallel and slightly further apart than height of an eye measured medially, malar space with subocular suture distinct, with weak striae on either side, supraclypeal area and anterior region of face strongly protruding with tooth-like appendages (Fig. 213). Pronotal plate not protruding, viewed fronto-dorsally, flattened into pronotum (*cf.* Fig. 223), anterior and posterior parts of plate connected by a medial bridge with a fovea on either side, open laterally. Mesoscutum smooth, polished, with notaulices weakly indicated, converging towards scutellum, sometimes absent in anterior area (Fig. 218); scutellar cup large, rim of cup overhanging disc, viewed dorsally, basal half concave, apical half convex (Fig. 218); scutellar disc with radiating ridges. Mesopleura with a distinct suture, area below suture coriaceous; propodeal carinae bowed medially, inner area smooth, polished, lateral margins with tufts of pubescence. Segment 1 of gaster obscured, in the form of a narrow ring, tergite 2 the largest, tergites 3 and 4 sometimes visible in lateral view. Wing surface pubescent, with apical hair fringe, radial cell of forewing with a closed cell (this is sometimes difficult to appreciate). Legs with short broad coxae and scattered pubescence, femora, tibiae and tarsi moderately pubescent. Colour: antenna yellow basally, brownish apically, coxa and femur brownish, tarsus yellow, head, thorax and gaster black.

♂. Antenna 15-segmented, filiform, segment 3 longer than 4, curved, swollen distally.

MATERIAL EXAMINED

Holotype ♀, **Zimbabwe**: Salisbury, Chishawasha, x.1979 (*A. Watsham*) (BMNH).

Paratypes. **Aldabra**: 1 ♂, Astove Atoll (BMNH). **Nigeria**: 4 ♀, 8 ♂ (BMNH). **Zaire**: 17 ♀, 43 ♂ (MRAC). **Zambia**: 5 ♂ (BMNH). **Zimbabwe**: 19 ♀, 13 ♂ (BMNH).

REMARKS. Distinguished from *pallida* by the presence of notaulices and by the antenna.

RHOPTROMERIS Foerster

Rhoptromeris Foerster, 1869: 344. Type-species: *Cothonaspis eucera* Hartig, 1841, by original designation [a junior synonym of *Cothonaspis heptoma* Hartig, 1840].

Miomoera Foerster, 1869: 352. Type-species: *Miomoera aberrans* Foerster, 1869, by subsequent designation, Rohwer & Fagan 1917: 371.

Hexamerocera Kieffer, 1901: 175. Type-species: *Eucoila rufiventris* Giraud, 1860, by subsequent designation, Ashmead, 1903: 66.

DIAGNOSIS. ♀ antenna 13-segmented, with 7-segmented club in type-species (this varies from species to species), all club segments bear rhinaria and are generally darker than basal segments of flagellum. Segment 3 longer than 4 in type-species. ♂ antenna 15-segmented, segment 4 longer than 3, curved, swollen distally (Fig. 225). Head, viewed frontally, round, slightly longer than wide, supraclypeal area raised, malar area with a groove or sulcus extending from bottom of eye to margin of clypeus. Pronotal

plate, viewed dorsally, protruding, well developed (Fig. 6), lateral fovea on either side of plate enclosed by outer margins of anterior and posterior parts of plate. Mesoscutum smooth, polished, notaulices absent, in some species a row of hairs present in their place. Lateral bars of scutellum smooth, scutellar disc reticulate-rugose, sometimes with radiating striae from edge of narrow scutellar cup which has one or two fovea centrally. Mesopleurae smooth, shiny, mesopleural carina straight, metapleura sometimes with weak strigose sculpture ventrally and posteriorly; thorax with short dense pubescence on ventral parts. Propodeum with almost parallel carinae, either side of carinae with short dense pubescence. Segment 1 of gaster (petiole) visible in part laterally, crenulate (Fig. 249), base of tergite 2 with a ring of dense yellowish pubescence, usually complete on dorsal surface though usually incomplete in males (cf. Fig. 36), tergites 2–5 visible in ♀, 2–6 in ♂ in lateral view, hypopygium distinct (Fig. 227). Legs varying in length and robustness between species, fore-coxae slender, mid- and hind-coxae swollen, meta-tarsi as long as tarsal segments 2–4 combined, claws simple. Wings densely pubescent on surface, with apical fringe of hairs, radial cell of forewing long, between 2–3 × as long as width (Fig. 224), closed on front margin. Colour: antenna yellow basally, club segments darker, head and thorax blackish, gaster dark yellow-brown, legs yellowish, coxae and femora darker. *Rhoptromeris* is related to *Trichoplasta* and *Stentorceps*, sharing a derived character in the form of the pronotal plate. In all three genera the pronotal plate has the medial fovea between the anterior and posterior parts fused laterally. In most other genera the foveae or pits are open (Nordlander, 1982). *Rhoptromeris* has a characteristic radial cell, the veins 2r and Rs (Nordlander, 1982b) and Rs₂ and Rs₁ (Quinlan, 1979; Eady & Quinlan, 1963) of about equal length. The scutellar cup in all three genera is relatively small. In the males the 4th antennal segment is longer than the 3rd and modified (Fig. 225).

DISTRIBUTION. Old and New World.

Key to the Afrotropical species of *Rhoptromeris* Foerster

Females

- 1 Antenna filiform, segment 3 generally subequal to or shorter than 4 (Fig. 229), 4–13 at least 4 × as long as wide, those segments with rhinaria weakly swollen medially, not forming a conspicuous club 2
- Antenna subclavate, apical segments 4–13 less than 4 × as long as wide, segment 3 rarely shorter than 4, either subequal to or longer than 4, club segments with rhinaria, wider apically than basally (Fig. 237) 10
- 2 Antenna with the 6 apical segments bearing rhinaria (Fig. 229); hypopygium pronounced, ventral spine short; pronotal plate with a transverse groove, anterior and posterior parts of plate fused laterally *zeus* sp. n. (p. 308)
- Antenna with segments 7–9 bearing rhinaria (Figs 230, 267, 278), hypopygium not pronounced, ventral spine variable in length; pronotal plate either with a transverse groove medially between anterior and posterior parts of plate or with two fovea enclosed on lateral margin 3
- 3 Antenna with the 7 apical segments bearing rhinaria 4
- Antenna with 8–9 apical segments bearing rhinaria 6
- 4 Pronotal plate with a transverse groove medially between anterior and posterior parts (cf. Fig. 250); antenna with segment 3 shorter than 4 (Fig. 230).
Scutellar cup oval, scutellar disc with weak broken sculpture laterally, apex with radiating sculpture (Fig. 231) *oeta* sp. n. (p. 302)
- Pronotal plate with lateral foveae separated by a medial bridge (cf. Fig. 6); antennal segment 3 shorter than 4 (Fig. 272) 5
- 5 Apical antennal segments of antenna darker than basal flagellar segments; scutellar cup elliptical, polished, scutellar disc smooth, polished *cephheus* sp. n. (p. 297)
- Apical 3 segments of antenna white, segments 3 and 4 subequal, scutellar cup long, narrow, scutellar disc with radiating ridged sculpture laterally (cf. Fig. 238) *rwanki* sp. n. (p. 305)
- 6 Antenna with 9 apical segments bearing rhinaria, weakly swollen medially, pronotal plate with lateral fovea separated medially by a bridge *crito* sp. n. (p. 297)
- Antenna with 8 apical segments bearing rhinaria; fovea of pronotal plate either separated medially or in the form of a furrow 7
- 7 Pronotal plate with a transverse groove separating anterior and posterior parts (cf. Fig. 250), no medial bridge between lateral pits apparent *pagasa* sp. n. (p. 302)

- Pronotal plate with two lateral fovea separated by a shallow medial bridge (*cf.* Fig. 275) connecting anterior and posterior parts, antennal segment 3 shorter than 4 8
- 8 Scutellar disc with strong radiating striations, apex with strongly radiating ridges (Fig. 234), scutellar cup long, elliptical; the 8 apical segments of antenna with prominent rhinaria, weakly swollen medially (Fig. 282); fovea on pronotal plate separated by a broad medial bridge (*cf.* Fig. 232) *temesa* sp. n. (p. 306)
- Scutellar disc with aberrant sculpture; pronotal plate with a narrow medial bridge connecting anterior and posterior parts (*cf.* Fig. 275) 9
- 9 Apical segments of antenna white; visible parts of gastral segments 3 and 4 punctate *rutshuris* sp. n. (p. 305)
- Apical segments of antenna darker than yellowish basal segments; segments 3 and 4 of gaster impunctate *agis* sp. n. (p. 295)
- 10 Antennal club 6-segmented 11
- Antennal club 7–8-segmented 15
- 11 Pronotal plate with a transverse groove between anterior and posterior parts, closed laterally (*cf.* Fig. 250), medial bridge not clearly defined 12
- Pronotal plate with two fovea between anterior and posterior parts, separated medially by a bridge (*cf.* Figs 232, 275) 13
- 12 Antennal club sharply indicated (Fig. 237); segment 3 as long as 4+5, 5–7 a little longer than wide (Fig. 237) *afer* sp. n. (p. 294)
- Antennal club weakly indicated, segments 8–13 weakly swollen medially, 3 and 4 subequal in length *velia* sp. n. (p. 307)
- 13 Apex of tergite 2 of gaster with scattered punctures, tergites 3 and 4 densely punctate on visible parts.
Segment 3 of antenna clearly longer than 4 (Fig. 240); scutellar cup elliptical, disc polished, rounded apically *abba* sp. n. (p. 294)
- Tergites of gaster impunctate, scutellar disc conical 14
- 14 Apex of scutellar disc weakly conical, surface reticulate-coriaceous (Fig. 244); antenna short, as long as distance between front of head and apex of gaster, club segments a little longer than wide (Fig. 242) *diversa* sp. n. (p. 299)
- Apex of scutellar disc weakly tapered (Fig. 245), surface reticulate-rugose; antenna longer than distance between front of head and apex of gaster, club segments of antenna at least 2 × as long as wide (Fig. 241) *connatus* sp. n. (p. 297)
- 15 Antennal club 7-segmented 16
- Antennal club 8-segmented 30
- 16 Pronotal plate with a weak transverse area between anterior and posterior parts, closed on lateral margins (Fig. 250) 17
- Pronotal plate with two fovea separated medially by a bridge between anterior and posterior, closed laterally (*cf.* Fig. 275) 20
- 17 Antennal segment 3 longer than 4, club segments sharply delineated (Fig. 247), at most twice as long as broad; hypopygium deep basally.
Ovipositor as long as base of hypopygium; pronotum, mesopleura and gaster yellow-brown, sharply contrasting with the black pronotal plate, thorax and head *bicolor* sp. n. (p. 296)
- Antennal segments 3 and 4 subequal and/or club segments not sharply delineated; hypopygium not deep basally (Fig. 249) 18
- 18 Apex of 3rd and 4th segment of gaster finely punctate (Fig. 249).
Basal six segments of antenna yellowish, club segments 7–10 black, 11–13 white *zetes* sp. n. (p. 308)
- Apex of 3rd segment and visible apical segment of gaster impunctate 19
- 19 Antennal segments 4–6 subequal in length, the seven apical segments with rhinaria, not forming a distinct club (Fig. 251) *persius* sp. n. (p. 304)
- Antennal segments 3–6 subequal, the seven apical segments with pronounced rhinaria, forming a distinct club (Fig. 253) *equalis* sp. n. (p. 300)
- 20 Apex of segment 3 of gaster and visible apical segments finely punctate 21

- Apex of segment 3 of gaster and visible apical segments impunctate (if some species weakly punctate then antennal segments 4–6 quadrate) 25
- 21 Antennal segment 3 as long as 4+5 22
 - Antennal segment 3 shorter than 4+5 23
- 22 Club segments 7–13 of antenna not pronounced (Fig. 248), segments 4–6 each longer than broad; scutellar disc smooth, polished *punctata* sp. n. (p. 304)
 - Club segments 7–13 pronounced (Fig. 259), segments 4–6 each as wide as long; scutellar disc reticulate-coriaceous *enna* sp. n. (p. 299)
- 23 Antennal segments 3 and 4 equal in length *sinis* sp. n. (p. 306)
 - Antennal segment 3 longer than 4 24
- 24 Segments 2–4 of gaster visible in lateral view, densely punctate (Fig. 254); metapleura smooth, anteroventral cavity without a tuft of pubescence; club segments 2 × as long as wide (Fig. 255) *bupalus* sp. n. (p. 296)
 - Segments 2–3 of gaster visible in lateral view, apex of 2 and visible part of 3 punctate; metapleura ridged, anteroventral cavity polished; club segments 3 × as long as wide (Fig. 256) *attis* sp. n. (p. 295)
- 25 Segment 3 of antenna longer than 4 26
 - Segment 3 of antenna equal to or shorter than 4 29
- 26 Anteroventral cavity of metapleuron reduced; segment 3 of antenna as long as 4+5, 4–6 almost quadrate, club segments sharply defined (Fig. 259) *enna* sp. n. (p. 299)
 - Anteroventral cavity of metapleuron with a tuft of pubescence; segment 3 of antenna shorter than 4+5 27
- 27 Foveae of pronotal plate very weak, broadly separated medially (*cf.* Fig. 262); club segments of antenna slightly longer than wide; whole insect completely pale yellowish orange, club segments very pale *pallidus* sp. n. (p. 303)
 - Foveae of pronotal plate separated by a narrow medial bridge between anterior and posterior parts (Fig. 228); club segments of antenna clearly longer than wide, darker than flagellar segments except apical segments in some species 28
- 28 Club segments of antenna 3 × as long as wide, antenna as long as distance between face and apex of gaster; scutellar cup large, oval, scutellar disc with weak radiating ridges, strongest on apical margin; pronotum, mesonotum and gaster light reddish orange, contrasting with blackish head and thorax; antenna yellow basally, brownish medially, apical segment or segments white *rufulus* sp. n. (p. 304)
 - Club segments of antenna 2 × as long as wide, antenna shorter than distance between face and apex of gaster; scutellar cup narrow, elliptical, scutellar disc weakly sculptured to smooth and polished; head, thorax and gaster blackish brown *heptoma* (Hartig) (p. 300)
- 29 Antennal segment 3 as long as 4; radial cell of forewing short, broad (Fig. 261); lateral margins of scutellar disc polished, apex with radiating sculpture (Fig. 263), scutellar cup elliptical *cubitalis* sp. n. (p. 298)
 - Antennal segment 3 shorter than 4; radial cell of forewing elongate (Fig. 265); scutellar disc with radiating striae, scutellar cup pear-shaped (*cf.* Fig. 263) *thales* sp. n. (p. 307)
- 30 Antennal segment 3 longer than 4, 4 and 5 subequal.
Scutellar disc reticulate-coriaceous, apex weakly conical, scutellar cup almost oval (Fig. 273); pronotal plate with a transverse groove medially connecting anterior and posterior parts, closed on lateral margins *naxos* sp. n. (p. 302)
 - Antennal segment 3 equal to or shorter than segment 4 31
- 31 Anterior and posterior parts of pronotal plate with a transverse groove between them (*cf.* Fig. 250) *hebe* sp. n. (p. 300)
 - Anterior and posterior parts of pronotal plate with two lateral foveae, one either side of medial bridge (Fig. 275) 32
- 32 Antennal segment 3 shorter than 4, 5 longer than 4, apical segments of gaster punctate *agis* sp. n. (p. 295)
 - Antennal segments 3 and 4 subequal in length, 5 shorter than 4, apical segments 7–12 darker, 13th segment white, basal segments yellowish; lateral margins of scutellar disc weakly striated, apex strongly rugose *navius* sp. n. (p. 301)

***Rhoptromeris abba* sp. n.**

(Figs 232, 240, 243)

DESCRIPTION. ♀. Antenna 13-segmented, segment 3 longer than 4, subequal to 4+5, 6 longer than 5, 7 longer than 6, 8–13 with rhinaria, forming a club (Fig. 240). Head, viewed frontally, with eyes further apart measured medially than height of an eye, face with sparse hairs on lower face, supraclypeal area slightly raised, malar grooves distinct, extending from bottom of eye to edge of mandibles, mandibles yellowish brown, maxillary palp 4-segmented, labial palp 2-segmented. Pronotal plate with lateral fovea either side of medial bridge closed, either side of pronotal plate with sparse pubescence (cf. Fig. 232). Mesoscutum smooth, polished, notaulices absent (some specimens with hairs in their place). Scutellar disc rounded at apex, lateral margins of disc weakly striated, almost smooth, scutellar cup narrow, minute, scutellar foveae shallow, polished, axillae minute, polished. Mesopleural suture distinct, almost parallel with ventral margin, metapleura ridged, anteroventral cavity distinct. Propodeal carinae subparallel, densely pubescent. Segment 1 of gaster as broad as long, base of tergite 2 of gaster with ring of dense pubescence at base, not complete on dorsal surface. Tergite 2 the largest in lateral view, apical margin finely punctate, visible parts of tergites 3 and 4 densely punctate, hypopygium prominent, ovipositor short. Legs of normal shape, coxae robust, mid and hind coxae pubescent apically, tarsi 5-segmented. Forewings relatively narrow, surface densely pubescent, apical margin with a fringe of hairs, radial cell of forewing closed, vein R_1 short, one-third as long as Rs_2 , veins M and $Rs+M$ obsolete. Colour: antenna yellowish basally, club segments dark, head, thorax and gaster dark chestnut-brown, legs orange-yellow.

♂. Antenna 15-segmented, 4th segment bent, swollen, outer margin weakly excavate (Fig. 243); gastral segments 2–6 visible laterally.

MATERIAL EXAMINED

Holotype ♀, **Kenya:** Kisumu, nr Lake Victoria, xi.1979 (*M. D. Croft*) (BMNH).

Paratypes. **Kenya:** 1 ♀, 1 ♂ (BMNH). **Zaire:** 3 ♀ (MRAC).

REMARKS. Closely related to *diversa* and *connatus* but distinguished by the punctate gastral segment.

***Rhoptromeris afer* sp. n.**

(Figs 237, 238, 239, 250)

DESCRIPTION. ♀. Antenna 13-segmented, segment 3 as long as 4+5, 6 longer than 5, 7 longer than 6, 8–13 bearing rhinaria, forming a very distinct club (Fig. 237). Head, viewed frontally, with eyes as far apart measured medially as height of an eye, supraclypeal area weakly raised, anterior tentorial pits distinct, epistomal suture indicated, malar grooves percurrent, mandibles yellowish, maxillary and labial palps normal, i.e. 4- and 2-segmented respectively. Pronotal plate with a transverse groove medially between anterior and posterior parts, lateral margins of groove not open (cf. Fig. 250), either side of pronotal plate with a tuft of hairs. Mesoscutum smooth, polished, notaulices absent. Apex of scutellum rounded, lateral margins of scutellar disc with weak radiating striae, scutellar cup narrow, elliptical (Fig. 238), scutellar foveae deep, arched basally, axillae polished. Mesopleural suture distinct, metapleura with a few aberrant wrinkles, anteroventral cavity with a tuft of pubescence. Propodeal carinae subparallel, converging basally, pubescent on either side. Segment 1 of gaster obscured by a ring of pubescence at base of tergite 2, complete on dorsal surface, tergite 2 the largest segment in lateral view, 3 and 4 partially visible, all segments smooth, polished, hypopygium short, ovipositor long. Legs normal shape, coxae robust, hind coxa pubescent apically, tarsi 5-segmented. Wings densely pubescent, apical margin with a hair fringe, radial cell closed, R_1 short, one-third as long as Rs_2 (Fig. 239), veins M and $Rs+M$ obsolete. Colour: antenna yellowish basally, club segments dark, head, thorax and gaster dark brownish yellow, legs yellowish.

♂ unknown.

MATERIAL EXAMINED

Holotype ♀, **Zaire:** N. Lac Kivu, Rwanki, 25.xii.1950 (*J. V. Leroy*) (MRAC).

Paratypes. **Zaire:** 4 ♀, same data as holotype (MRAC). **Uganda:** 1 ♀ (BMNH).

REMARKS. This species is one of two which can be separated from closely related species by the form of the pronotal plate. Together with *velia*, the medial area connecting the anterior and posterior parts is in the form of a shallow furrow.

Rhoptromeris agis sp. n.

(Figs 230, 246)

DESCRIPTION. ♀. Antenna 13-segmented, segment 3 shorter than 4, 5 longer than 4, 6–13 with rhinaria, forming a weak club. Head, viewed frontally, with eyes weakly converging, as far apart as height of an eye measured medially, anterior tentorial pits distinct, malar grooves present, face with scattered hairs extending to clypeal area, clypeus and mandibles yellowish, maxillary palp 4-segmented, labial palp 2-segmented. Pronotal plate with two fovea separated medially by a narrow bridge between anterior and posterior parts, closed on lateral margins, anterior part protruded (cf. Fig. 246), pronotum either side of plate with sparse pubescence. Mesoscutum smooth, polished, notaulices absent; scutellar disc rounded apically, scutellar foveae polished, lateral bars polished, scutellar disc with weak reticulate sculpture on lateral margins and long scattered setae, scutellar cup semi-oval, surface with a ring of minute hairs (cf. Fig. 230). Mesopleural suture distinct, metapleura weakly ridged, anteroventral cavity bare. Propodeal carinae weakly converging towards metanotal plate, either side of carinae pubescent. Segment 1 of gaster almost obscured by a ring of hair at base of tergite 2, sparse on dorsal surface, tergite 2 the largest in lateral view, occupying most of visible area, base of tergite 3 visible, impunctate, hypopygium long, narrow, ventral spine short. Legs long, thin, with fine pubescence on femora, tibiae and tarsi, tarsi 5-segmented. Forewings broad apically, surface densely pubescent, apex with a fringe of hairs, radial cell of forewing longer than wide, narrow basally, entirely closed on margin, veins *M* and *Rs+M* indicated, not pigmented. Colour: antenna yellowish basally, club segments dark, head, thorax and gaster dark chestnut-brown, legs yellowish.

♂ unknown.

MATERIAL EXAMINED

Holotype ♀, **Zaire**: Massif Ruwenzori, Kalonge, 2,600 m, Ruiss Karumbura, affl. Katauleko, 30.i.–21.ii.1953 (*P. Vanschuytbeock & J. Kekenbosch*) (MRAC).

Paratypes. **Zaire**: 5 ♀ (MRAC).

REMARKS. This species is very similar to *rutshuris* but can be distinguished by the antennal and gastral characters listed in the key.

Rhoptromeris attis sp. n.

(Figs 246, 256, 257)

DESCRIPTION. ♀. Antenna 13-segmented, segment 3 longer than 4, 4 longer than 5, 5 and 6 equal in length, 7–13 forming a distinct club (Fig. 256). Head, viewed frontally, with eyes as far apart measured medially as height of an eye, a row of hairs extending from outside antennal sockets to clypeus, malar grooves distinct, maxillary palp 4-segmented, labial palp 2-segmented. Pronotal plate with two fovea, one on either side of medial bridge joining anterior and posterior parts of plate, anterior part protruding forward (cf. Fig. 246). Pronotum either side of pronotal plate pubescent. Mesoscutum smooth, polished, notaulices absent, in some specimens a row of hairs in their place; scutellar disc rounded apically, lateral and hind margins of disc weakly striate, scutellar cup oval, apex with a large round fovea, base with minute fovea, scutellar foveae kidney-shaped, polished, lateral bars of scutellum short, broad, polished. Mesopleural suture distinct, metapleura with three distinct ridges, anteroventral cavity bare, propodeal carinae bowed medially, either side of carinae pubescent. Segment 1 of gaster in the form of a weakly crenulated ring, obscured by a ring of pubescence at base of tergite 1, complete though sparse on dorsal surface, tergite 2 the largest in lateral view, occupying most of surface area of gaster, apex of tergite 2 and whole of visible part of 3 punctate, hypopygium weakly swollen medially, coxae, femora, tibiae and tarsi pubescent, tarsi 5-segmented. Wing surface pubescent, with apical hair fringe, forewing broad apically, radial cell a little antenna yellowish basally, apical segments darker, head and thorax chestnut-brown, gaster light reddish brown, legs yellowish.

♂. Antenna 15-segmented, filiform, segment 4 the largest, narrow basally, swollen and twisted medially (Fig. 257).

MATERIAL EXAMINED

Holotype ♀, **Zaire**: Makpe/8, 5.xi.1951 (*H. de Saeger*) (MRAC).

Paratypes. **Zaire**: 2 ♀, 7 ♂ (MRAC).

REMARKS. Very similar to *bupalus* but separated by the gaster, the anteroventral cavity and the club segments.

Rhoptromeris bicolor sp. n.

(Figs 246, 247)

DESCRIPTION. ♀. Antenna 13-segmented, segment 3 longer than 4, 4 longer than 5, 5 and 6 subequal, club segments 7–13 sharply indicated, rhinaria prominent (Fig. 247). Head, viewed frontally, with eyes as far apart measured medially as height of an eye, a row of hairs present where frontal carinae would normally extend to clypeal area, clypeus and mandibles pubescent, malar grooves distinct, maxillary palp 4-segmented, labial palp 2-segmented, cheeks converging. Pronotal plate, viewed dorsally, protruding, medial bridge between anterior and posterior parts almost aberrant, a weak transverse area in its place, fovea either side closed laterally (Fig. 246), tufts of pubescence present on either side of plate. Mesoscutum smooth, polished, notaulices absent, lateral bars of scutellum smooth, scutellar fovea polished, scutellar disc dull with sparse broken radiating sculpture, absent in some specimens, apex rounded, scutellar cup broad, elliptical, apex with a small fovea and a ring of smaller fovea around rim, scutellar disc with long scattered hairs. Mesopleural suture distinct, metapleura with weak ridges, anteroventral cavity with a few short hairs. Propodeal carinae almost parallel, lateral margins of propodeum pubescent. Segment 1 of gaster short, broad, crenulate, almost obscured by a dense ring of hairs at base of tergite 2, tergite 2 the largest, occupying whole of visible area in lateral view, tergites 3 and 4 not visible, gaster impunctate, hypopygium prominent, ventral spine long, broad apically in lateral view. Legs long, coxae swollen basally, femora short, swollen medially, tibiae and tarsi long, legs overall with scattered pubescence, tarsi 5-segmented. Wing surface pubescent, with apical fringe of hairs, forewing broad apically, radial cell closed on wing margin, longer than broad, broader apically than at base, veins *M* and *Rs+M* not indicated. Colour: antenna yellow basally, dark apically, head and mesoscutum black, dorsal surface of gaster chestnut-brown, pronotum, including plate, mesopleura and lower half of gaster, bright orange-yellow.

♂ unknown.

MATERIAL EXAMINED

Holotype ♀, **Zimbabwe**: Salisbury, Chishawasha, iii.1980 (*A. Watsham*) (BMNH).Paratypes. **Nigeria**: 2 ♀ (BMNH). **Zaire**: 10 ♀ (MRAC).

REMARKS. A distinctive and easily recognised species by the sharp colour contrasts of the various thoracic parts. Very closely related to *rufulus* but the colour pattern of the antenna of *rufulus* distinguishes it.

Rhoptromeris bupalus sp. n.

(Figs 250, 255)

DESCRIPTION. ♀. Antenna 13-segmented, segment 3 longer than 4, 4 longer than 5, 6 longer than 5, shorter than 7, 7–13 forming a distinct club (Fig. 255), club segments with rhinaria. Head, viewed frontally, with inner margins of eye further apart measured medially than height of an eye, a row of scattered hairs extending from outer margins of antenna to anterior tentorial pits, cheeks and mandibles with scattered hairs, malar grooves distinct, maxillary palp 4-segmented, labial palp 2-segmented, cheeks weakly convergent. Pronotal plate fovea either side of medial bridge between anterior and posterior parts closed on lateral margins (*cf.* (Fig. 250)), pubescent on either side. Mesoscutum smooth, polished, notaulices absent, lateral bars polished, broad basally, scutellar foveae kidney-shaped, polished, scutellar disc polished, with scattered hairs, apex rounded, with radiating ridges, scutellar cup semi-oval with a transverse fovea apically. Mesopleural suture distinct, metapleura almost completely smooth, anteroventral cavity without hairs. Propodeal carinae converging towards metanotal plate, sparsely pubescent on outer margins, lateral margins of propodeum with tufts of pubescence. Segment 1 of gaster in the form of a ring, obscured by ring of hairs at base of 2, ring of hairs sparse on dorsal surface, tergites 2–4 visible in lateral view, 3 and 4 densely punctate, hypopygium not pronounced, with scattered submarginal hairs, ovipositor short. Legs normal shape, coxae elongate, weakly swollen medially, sparsely pubescent. Wing surface pubescent, with apical hair fringe, radial cell of forewing entirely closed on wing margin, veins *M* and *Rs+M* not indicated. Colour: antenna yellow, gaster chestnut-brown, legs yellow.

♂ unknown.

MATERIAL EXAMINED

Holotype ♀, **Zimbabwe**: Salisbury, Chishawasha, ii.1980 (*A. Watsham*) (BMNH).Paratypes. **Kenya**: 1 ♀ (BMNH). **Uganda**: 1 ♀ (BMNH). **Zaire**: 3 ♀ (MRAC). **Zimbabwe**: 1 ♀, same data as holotype (BMNH). **Réunion**: 4 ♀ (*S. Quilici*).

REMARKS. Closely related to *attis* but separated by the antennal segments and the presence of a tuft of hairs in the anteroventral cavity of the metapleuron.

***Rhoptromeris cepheus* sp. n.**

(Figs 246, 272)

DESCRIPTION. ♀. Antenna 13-segmented, filiform, segment 3 shorter than 4, 5–13 subequal, 7–13 with rhinaria, medially swollen (Fig. 272). Head, viewed frontally, with inner margins of eyes convergent, a row of widely spaced hairs along margins of supraclypeal area, malar grooves distinct, maxillary palp 4-segmented, labial palp 2-segmented. Pronotal plate protruded, anterior and posterior parts joined by a medial bridge, fovea either side of bridge closed on lateral margins (*cf.* Fig. 246). Pronotum either side of plate with tufts of pubescence. Mesoscutum smooth, polished, notaulices absent, lateral bars broad-based, smooth, polished, scutellar fovea smooth, polished, kidney-shaped, lateral margins of scutellar disc polished, apex rounded, surface with radiating ridges, scutellar cup semi-oval, apical half with a transverse fovea and minute pits on basal and medial areas. Mesopleural suture distinct, parallel with pre-coxal suture, metapleura ridged, anteroventral cavity bare. Propodeal carinae almost parallel, very weakly bowed medially, pubescent on lateral margins. Segment 1 of gaster crenulate, in form of a ring, segment 2 of gaster with a ring of pubescence at base, complete on dorsal surface, tergites 2–4 of gaster visible in lateral view, tergite 2 the largest, smooth, impunctate, hypopygium pronounced, ovipositor short. Legs long, coxae elongate, femora short, swollen basally, tibiae and tarsi densely pubescent, tarsi 5-segmented. Wing surface pubescent, with apical hair fringe, radial cell of forewing entirely closed, veins *M* and *Rs+M* not indicated. Colour: antenna yellow basally, apical segments blackish, with rhinaria, head, thorax and gaster dark chestnut-brown, legs pale yellow.

♂ unknown.

MATERIAL EXAMINED

Holotype ♀, **Kenya**: Kisumu, Lake Victoria, xi.1979 (*M. D. Croft*) (BMNH).Paratype. **Kenya**: 1 ♀, same data as holotype (BMNH).REMARKS. Distinguished from *rwanki* by the apical segments of the antenna and the polished scutellar disc.***Rhoptromeris connatus* sp. n.**

(Figs 241, 245)

DESCRIPTION. ♀. Antenna 13-segmented, segments 3 and 4 equal in length, 5 shorter than 4, 6 longer than 5, 6–7 subequal, 8–13 forming a weak club, swollen medially, bearing rhinaria (Fig. 241). Head, viewed frontally, with inner margins of eyes weakly converging, further apart than height of an eye measured medially, a row of hairs extending from outer margins of antenna to clypeal area, malar grooves distinct, clypeus and surface of mandibles with long scattered hairs, maxillary palp 4-segmented, labial palp 2-segmented. Pronotal plate with lateral fovea either side of pronotal plate closed. Mesoscutum smooth, polished, notaulices absent, lateral bars of scutellum polished, scutellar fovea semi-circular, sculptured in part, scutellar disc weakly conical apically, reticulate-rugose, scutellar cup oval with a transverse fovea apically (Fig. 245). Mesopleural suture distinct, bowed medially, metapleura ridged, anteroventral cavity obsolete. Propodeal carinae parallel, densely pubescent on lateral margins. Segment 1 of gaster obscured by a ring of hairs at base of tergite 2, complete on dorsal surface, segment 1 crescent-shaped in lateral view, crenulate, tergite 2 the largest, occupying whole of visible surface in lateral view, impunctate, hypopygium weakly produced, ventral spine very short. Legs long, thin, pubescent, coxae elongate, swollen basally, femora short, swollen medially, tibiae and tarsi long. Wing surface pubescent with apical hair fringe, radial cell of forewing entirely closed on wing margin, veins *M* and *Rs+M* indicated by folds. Colour: antenna completely yellow, head, thorax and gaster light chestnut-brown, legs yellow.

♂ unknown.

MATERIAL EXAMINED

Holotype ♀, **Zaire**: Mabanga, 23.ix.1952 (*H. de Saeger*) (MRAC).Paratypes. **Zaire**: 9 ♀ (MRAC).REMARKS. This species could be confused with those species of *Trichoplasta* with a closed radial cell and conical scutellum, but the sculpture of the scutellar disc and the venation distinguish it as a *Rhoptromeris*.***Rhoptromeris crito* sp. n.**

(Figs 232, 267, 274)

DESCRIPTION. ♀. Antenna 13-segmented, filiform, segment 3 shorter than 4, 4 longer than 5, 5–8 subequal in length, 9–13 shorter than 8, 11–13 white, 5–13 each with rhinaria, forming a very weak club (Fig. 267),

segments 3–13 at least $4 \times$ as long as wide. Head, viewed frontally, almost round, slightly longer than broad, eyes as far apart as height of an eye measured medially, weakly converging, a few widely spaced hairs present between margins of antenna and clypeus, anterior tentorial pits distinct. Pronotal plate protruding, medial bridge between anterior and posterior parts distinct, fovea either side enclosed laterally, either side of plate with tufts of pubescence (Fig. 232). Mesoscutum smooth, polished, anterior median lines and notaulices absent; lateral bars of scutellum polished, scutellar foveae kidney-shaped, scutellar cup a little longer than wide, with a transverse fovea on lower half, basal area of cup pitted, scutellar disc reticulate-rugose laterally, weakly ridged apically, rounded (Fig. 274). Mesopleural suture complete, metapleura weakly ridged, anteroventral cavity with short abraded hairs; lateral margins of propodeum sparsely pubescent, propodeal carinae almost parallel, very weakly bowed medially. Segment 1 of gaster short, broad, crenulate, obscured by a ring of dense pubescence at base of tergite 2, complete on dorsal surface, tergite 2 the largest in lateral view, tergites 3 and 4 partially visible, gaster impunctate, hypopygium not pronounced, with long subapical setae. Wing surface pubescent, with apical fringe of hairs, radial cell of forewing long, narrow basally, closed on wing margin, veins *Rs+M* weakly pigmented basally, obsolete towards apex. Legs long, slender, coxae elongate, weakly swollen medially, femora weakly swollen basally, tibiae and tarsi long, slender. Colour: antenna dark brown-orange basally, brown medially, apical segments light orange-yellow.

♂ unknown.

MATERIAL EXAMINED

Holotype ♀, **Madagascar**: Mandrake, ii.1944 (*A. Seyrig*) (MRAC).

REMARKS. This is the only species so far recognised which has rhinaria on 9 apical segments of the antenna (Fig. 267).

Rhoptromeris cubitalis sp. n.

(Figs 261, 262, 263)

DESCRIPTION. ♀. Antenna 13-segmented, segments 3 and 4 equal in length, 5 shorter than 4, 5–13 subequal in length, club segments 7–13 with rhinaria, not sharply delineated. Head, viewed frontally, with inner margins of eye further apart measured medially than height of an eye, with a row of scattered hairs between outer margins of antenna and clypeus, anterior tentorial pits distinct, with a carina extending to clypeus, malar grooves distinct. Pronotal plate with two lateral foveae, one on either side of medial bridge between anterior and posterior parts, closed on lateral margins (Fig. 262), either side of plate with a tuft of pubescence. Mesoscutum smooth, polished, anterior median lines and notaulices absent though indications present below surface; lateral bars smooth, polished, scutellar fovea deep, scutellar disc with ridges radiating out from narrow elliptical scutellar cup (Fig. 263), cup with an apical fovea, disc truncate apically. Mesopleural suture distinct, metapleura polished, anteroventral cavity with a tuft of pubescence, area close to propodeum densely pubescent. Propodeal carinae parallel, pubescent. Segment 1 of gaster in the form of a crenulate ring, partially hidden by a dense ring of pubescence at base of tergite 2, complete on dorsal surface, tergites 2–4 visible in lateral view, impunctate, tergite 2 the largest, hypopygium not pronounced, ventral spine long. Legs long, slender, coxae weakly swollen basally, femora strongly swollen basally, tibiae and tarsi long, slender, coxae and femora with sparse hairs, femora tibiae and tarsi pubescent. Wing surface pubescent, with apical hair fringe, forewings broad apically with radial cell closed on wing margin (Fig. 261), short, little longer than broad, veins *M* and *Rs+M* weakly pigmented basally, obsolete apically. Colour: antenna dark orange-yellow, head dark brown, thorax and gaster light brown, legs yellow.

♂ unknown.

MATERIAL EXAMINED

Holotype ♀, **Zaire**: Secteur Tahisberimu, Talya Nerd, 23.iii.1954 (*P. Vanschuythbroeck & M. Synave*) (MRAC).

Paratype. **Zaire**: 1 ♀ (MRAC).

REMARKS. This species is close to *thales* but the length of antennal segment 3 is equal to 4, the lateral margins of the scutellar disc are polished and the radial cell is shorter than in *thales*.

***Rhoptromeris diversa* sp. n.**

(Figs 242, 244, 246)

DESCRIPTION. ♀. Antenna 13-segmented, segment 3 as long as 4+5, 5 shorter than 6, 8–13 forming a distinct club, rhinaria prominent (Fig. 242). Head, viewed frontally, with eyes further apart measured medially, than height of an eye, with scattered hairs in a line extending from outer edge of antennal socket to clypeal area, anterior tentorial pits distinct, malar grooves distinct, clypeus and mandibular area with long scattered hairs. Pronotal plate with two foveae, one either side of medial bridge between anterior and posterior parts, closed on lateral margins (*cf.* Fig. 246), either side of plate pubescent. Mesoscutum smooth, polished, notaulices absent, lateral bars of scutellum broad basally, smooth, polished, scutellar foveae half-moon-shaped, polished, scutellar disc weakly conical apically, surface rugose, scutellar cup semi-oval, apex with a transverse fovea, base pitted (Fig. 244). Mesopleural suture distinct, metapleura ridged, anteroventral cavity polished. Propodeal carinae parallel, sides of propodeum weakly pubescent. Segment 1 of gaster in the form of a crenulate ring, partially hidden by ring of pubescence at base of tergite 2, tergite 2 the largest in lateral view, segment 3 visible, gaster impunctate, hypopygium small, ovipositor short. Legs short, robust, coxae and femora weakly swollen basally, tibiae stout apically, tarsi short, stout, coxae sparsely pubescent, tibiae and tarsi moderately pubescent. Wing surface pubescent, apical margin with a fringe of hairs, forewing narrow, radial cell closed on margin, longer than broad, veins *M* and *Rs+M* not indicated. Colour: antenna yellow basally, brownish apically, head, thorax and gaster light orange-brown, legs yellow.

♂ unknown.

MATERIAL EXAMINEDHolotype ♀, **South Africa:** Cape Province, Somerset East, 23–31.xii.1930 (*R. E. Turner*) (BMNH).Paratypes. **South Africa:** 1 ♀, same data as holotype (BMNH). **Uganda:** 1 ♀ (BMNH). **Zaire:** 7 ♀ (MRAC).

REMARKS. The absence of punctures on the gaster and the weakly conical scutellum separate this species from *abba*, and the lengths of the individual club segments separate it from *connatus*, see key.

***Rhoptromeris enna* sp. n.**

(Figs 246, 259)

DESCRIPTION. ♀. Antenna 13-segmented, segment 3 as long as 4+5, 4–6 subquadrate, 7–13 forming a distinct club (Fig. 259). Face, viewed frontally, with eyes as far apart as height of an eye measured medially, face with a row of scattered hairs extending from outer margins of antenna to clypeus, malar grooves distinct, lower face with scattered hairs. Pronotal plate with two foveae, one on each side of medial bridge between anterior and posterior parts of plate, bridge narrow (*cf.* Fig. 246), fovea closed on lateral margins. Pronotum either side of pronotal plate with tufts of pubescence. Mesoscutum smooth, polished, anterior median lines and notaulices absent; lateral bars of scutellum polished, scutellar disc reticulate-rugose-coriaceous, rounded apically, scutellar cup narrow, elliptical, apex with a large transverse fovea, basal half sculptured, rim of cup broad. Mesopleural suture distinct, metapleura with a weak ridge on margins closest to propodeum, anteroventral cavity with a tuft of pubescence. Propodeal carinae weakly bowed medially, either side of propodeum pubescent. Segment 1 of gaster obscured by a ring of dense pubescence at base of tergite 2, tergite 2 the largest in lateral view, 3–4 partially visible, apex of tergite 2 and visible parts of 3 and 4 punctate, hypopygium prominent, ventral spine short, subbasal hairs present. Legs normally proportioned, mid and hind coxae swollen basally, femora swollen basally and medially, tibiae widest apically, tarsi long, slender, femora, tibiae and tarsi pubescent. Wing surface pubescent, with apical hair fringe, radial cell of forewings closed, longer than broad, veins *M* and *Rs+M* not pigmented, folds indicated. Colour: antenna yellowish basally, darker apically, head, thorax and gaster dark chestnut-brown, legs yellow.

♂ unknown.

MATERIAL EXAMINEDHolotype ♀, **Zaire:** Ruwenzori, Riv. Katunda, 1,600 m, 8.i.1954 (*H. Synave*) (MRAC).

REMARKS. This species is closely related to *punctata* but is distinguished by antennal segments 4–6 being subquadrate and by the sculpture of the scutellar disc.

***Rhoptromeris equalis* sp. n.**

(Figs 253, 290)

DESCRIPTION. ♀. Antenna 13-segmented, segments 3–6 subequal in length, 7–13 with rhinaria, forming a distinctive club, each swollen medially (Fig. 253). Head, viewed frontally, with eyes converging weakly, narrowest at a point between inner margins of eyes, and less than height of an eye, with a row of scattered hairs between outer antennal sockets and epistomal suture, anteroventral pits and malar grooves distinct, clypeus and mandibular area with sparse pubescence. Pronotal plate with a transverse groove between anterior and posterior parts of plate, medial bridge not indicated (Fig. 290), lateral margins of groove closed. Mesoscutum smooth, polished, notaulices absent, lateral bars of scutellum small, polished, scutellar fovea oval, polished; scutellar disc with radiating ridges, apex rounded. Mesopleural suture distinct, metapleural ridges on ventral margins, anteroventral cavity bare. Propodeal carinae bowed medially, densely pubescent on lateral margins. Segment 1 of gaster not visible, obscured by a dense ring of hairs at base of tergite 2, tergite 2 the largest, 3 and 4 partially visible in lateral view, gaster impunctate, hypopygium small, ventral spine not exposed. Legs normal, coxae elongate, swollen basally, femora swollen basally, tibiae swollen apically, tarsi slender. Wings long, narrow, surfaces pubescent, margins with a fringe of hairs, radial cell of forewing closed on margin, slightly longer than broad, veins *M* and *Rs+M* not pigmented, only folds indicated. Colour: antenna orange-yellow basally, apical segments darker, head and thorax dark chestnut-brown, gaster chestnut-red, legs yellow.

♂ unknown.

MATERIAL EXAMINED

Holotype ♀, **Cameroun**: Nkoemvon, 29.vii.1979 (*D. Jackson*) (BMNH).Paratypes. **Cameroun**: 2 ♀, same data as holotype (BMNH). **Zaire**: 3 ♀ (MRAC).REMARKS. Distinguished from *persius* by the distinct club with pronounced rhinaria on each segment.***Rhoptromeris hebe* sp. n.**

(Fig. 250)

DESCRIPTION. ♀. Antenna 13-segmented, segments 3+4 subequal, 5 shorter than 4, 6–13 forming a weak club, each segment with rhinaria. Head, viewed frontally, with inner margins of eyes further apart than height of an eye measured medially, face with scattered hairs, anterior tentorial pits distinct, malar grooves distinct, clypeus and mandibles sparsely pubescent. Pronotal plate with a transverse groove medially between anterior and posterior parts of plate, medial bridge between both parts not apparent (*cf.* Fig. 250), groove closed on lateral margins, either side of plate with tufts of pubescence. Mesoscutum smooth, polished, scutellar foveae half-moon-shaped, polished; lateral bars of scutellum narrow, polished; scutellar disc rounded apically, lateral surfaces smooth, with radiating ridges apically. Mesopleural suture distinct, metapleura weakly ridged, anteroventral cavity with a minute tuft of hair. Propodeal carinae parallel, almost as far apart as their length, with tufts of pubescence on outer margins. Segment 1 of gaster crescent-shaped, viewed laterally, crenulate, partially obscured by a ring of dense pubescence at base of tergite 2, complete on dorsal surface, tergite 2 the largest, 3 and 4 partially visible in lateral view, gaster impunctate, hypopygium broad basally, ventral spine short, with sparse subbasal hairs. Legs normal, mid and hind coxae swollen, hind coxae elongate, femora swollen basally, tibiae broader apically, all pubescent, tarsi 5-segmented. Wings narrow, surfaces pubescent, apical margins with a fringe of hairs, radial cell of forewing closed on margin, longer than broad, veins *M* and *Rs+M* not pigmented, weakly indicated by folds. Colour: antenna yellowish basally, club segments darker, head, thorax and gaster yellowish brown, legs yellow.

♂ unknown.

MATERIAL EXAMINED

Holotype ♀, **Zaire**: 18.ix.1952 (*H. de Saeger*) (MRAC).Paratypes. **Zaire**: 10 ♀ (MRAC).REMARKS. Closely resembles *navius* but distinguished by the pronotal plate (see key).***Rhoptromeris heptoma* (Hartig)**

(Figs 7, 224, 225, 226)

Cothonaspis heptoma Hartig, 1840: 201. Holotype ♀, GERMANY (ZSBS).

Cothonaspis eucerus Hartig, 1841: 357. Holotype ♀, GERMANY (ZSBS). [Synonymy by Cameron, 1890: 206; Hellén, 1960: 8.]

DESCRIPTION. ♀. Antenna 13-segmented, segment 3 longer than 4, 4 longer than 5, 5 and 6 subequal in length, 7–13 forming a distinct club (Fig. 7). Face, viewed frontally, with eyes further apart than height of an eye measured medially, face with a row of hairs extending from outer margins of antennal sockets to clypeus, malar grooves distinct, supraclypeal area and mandibular area with sparse scattered hairs. Pronotal plate with two fovea, one each side of medial bridge between anterior and posterior parts of plate, either side of plate with a tuft of pubescence on lateral margins of pronotum. Mesoscutum smooth, polished, notaulices absent, sparse hairs along margin with pronotum; lateral bars of scutellum polished, scutellar foveae almost round, scutellar disc punctate-reticulate to almost smooth, rounded apically, scutellar cup longer than broad, elliptical (Fig. 226). Mesopleural suture strongly bowed medially, metapleura mainly smooth with a few ridges, anteroventral cavity with a tuft of hairs. Propodeal carinae bowed medially, pubescent laterally. Segment 1 of gaster obscured by a ring of dense pubescence at base of tergite 2, only a crescent-shape apparent, tergites 2–4 visible in lateral view, impunctate, hypopygium not prominent, ventral spine short, subbasal hairs present. Legs normal, mid and hind coxae swollen, slender, with tufts of hair, femora swollen basally, tibiae widest apically, slender, all segments of legs weakly pubescent. Wing surfaces pubescent, margins with apical hair fringe, radial cell of forewing closed on margin, Rs_2 and Rs_1 of equal length, M and $Rs+M$ indicated (Fig. 224). Colour: antenna yellow basally, dark apically, head, thorax and gaster shining black-brown, legs yellowish.

♂. Antenna 15-segmented, segment 3 curved on outer margin, weakly swollen apically, segment 4 twice length of 3, curved, swollen, 5–15 filiform (Fig. 225).

MATERIAL EXAMINED

South Africa: 3 ♀ (BMNH). **Zaire:** 3 ♀ (MRAC).

REMARKS. *R. heptoma* is a parasite of Chloropidae (Nordlander, 1978). The specimens from South Africa and Zaire are very similar to European *heptoma* but differ very slightly in colour and the form of the pronotal plate.

Rhoptromeris navius sp. n.

(Figs 275, 276)

DESCRIPTION. ♀. Antenna 13-segmented, segments 3 and 4 subequal in length, 5 shorter than 4, 6–13 forming a club, rhinaria prominent. Head, viewed frontally, with eyes weakly convergent, further apart measured medially than height of an eye, a row of scattered long hairs extends from outer margin of antennal sockets to clypeal area, clypeus and mandibles with sparse hairs, anterior tentorial pits and malar grooves distinct; pronotal plate, viewed frontally, angular laterally, anterior and posterior parts separated medially by a bridge with a fovea on either side, closed on lateral margins (Fig. 275), lateral margins either side of pronotal plate with tufts of pubescence. Mesoscutum smooth, polished, notaulices absent, in their place a row of sparse hairs; lateral bars of scutellum polished, scutellar fovea lenticular in shape, smooth, polished, disc reticulate-rugose, scutellar cup elliptical, a little longer than broad, rim distinct, apex with a large fovea, apical margin of disc rounded. Mesopleural suture distinct, metapleura with longitudinal ridges, anteroventral cavity with a tuft of hairs. Propodeal carina parallel, weakly pubescent medially, strongly pubescent laterally. Segment 1 of gaster partially visible in lateral view, in the form of a crenulate ring, tergite 2 of gaster with a dense ring of pubescence basally, entire on dorsal surface, tergites 2–4 of gaster visible in lateral view, tergite 2 the largest, apex of 2 and visible parts of 3 and 4 punctate, hypopygium not pronounced, ventral spine short, subbasal hairs present. Legs long, slender, mid and hind coxae weakly swollen, femora swollen basally, tibiae broadest apically, tarsi 5-segmented. Wings relatively long, slender, surface pubescent, apical margins with a fringe of hairs, radial cell of forewing closed on margin, narrow basally, veins M and $Rs+M$ not indicated (Fig. 276). Colour: antenna yellow basally, median segments blackish brown, apical segments yellowish, head and thorax blackish, gaster chestnut-brown, legs yellow.

♂ unknown.

MATERIAL EXAMINED

Holotype ♀, **Zaire:** 26.ix.1951 (*H. de Saeger*) (MRAC).

Paratypes. **Kenya:** 2 ♀ (BMNH). **Zaire:** 4 ♀ (MRAC). **Zimbabwe:** 2 ♀ (BMNH).

REMARKS. This species has an 8-segmented club with a distinctive arrangement of colour; this and the relative lengths of the antennal segments enable it to be easily separated from other species.

Rhoptromeris naxos sp. n.

(Figs 250, 268, 273)

DESCRIPTION. ♀. Antenna 13-segmented, segment 3 longer than 4, 4 and 5 subequal, 5 shorter than 6, 6–13 forming a club, rhinaria prominent (Fig. 268). Head, viewed frontally, with eyes further apart measured medially than height of an eye, face with a row of scattered hairs extending from outer edges of antennal sockets to anterior tentorial pits, malar grooves distinct, mandibles with sparse hairs. Pronotal plate, viewed frontodorsally, without a bridge between anterior and posterior parts, separated medially by a transverse groove closed laterally, lateral margins of plate angular (*cf.* Fig. 250), either side of plate with tufts of pubescence. Mesoscutum smooth, polished, with a row of hairs in place of notaulices; lateral bars of scutellum polished, scutellar fovea kidney-shaped, scutellar disc weakly sculptured laterally, apex weakly rounded, rugose (Fig. 273). Mesopleural suture distinct, metapleura strongly ridged on ventral margin, anteroventral cavity without hairs. Propodeal carinae bowed medially, lateral margins of propodeum weakly pubescent. Segment 1 of gaster, viewed laterally, wider than long, in the form of a crenulate ring, tergites 2–4 visible in lateral view, tergite 2 the largest with a ring of pubescence at its base, apex of 2 and visible parts of 3 and 4 punctate, hypopygium not pronounced, ventral spine not projecting. Legs pubescent, with long mid and hind coxae, swollen from base to midway to apex, femora short, swollen basally, tibiae broad apically, tarsi 5-segmented. Wing surfaces pubescent, with apical fringe of hairs, radial cell of forewing closed on margin, veins *M* and *Rs+M* absent. Colour: antenna yellow basally, apical segments darker, except segment 13 yellow, head, thorax and gaster reddish chestnut-brown. Legs yellow. ♂ unknown.

MATERIAL EXAMINED

Holotype ♀, **Zaire**: Kanayabayonga, Kubasha, 1,760 m, 7.xii.1934 (*G. F. de Witte*) (MRAC).

Paratypes. **Uganda**: 1 ♀ (BMNH). **Zaire**: 13 ♀ (MRAC).

REMARKS. This species is separated by the antennal segment ratios (Fig. 268).

Rhoptromeris oeta sp. n.

(Figs 230, 231, 250)

DESCRIPTION. ♀. Antenna 13-segmented, segment 3 shorter than 4, 4 longer than 5, 5–6 subequal in length, 7–13 weakly swollen medially, with rhinaria, the whole filiform, club segments not sharply defined (Fig. 230). Head, viewed frontally, with eyes converging, as far apart ventrally as height of an eye measured medially, scattered hairs extending from antennal sockets to clypeal margin, malar grooves distinct, anterior tentorial pits distinct. Pronotal plate with a transverse groove between anterior and posterior parts, closed on lateral margins (*cf.* Fig. 250). Mesoscutum smooth, polished, notaulices absent; lateral bars of scutellum smooth, polished, scutellar foveae lenticular, lateral margins of disc weakly sculptured, apex with radiating sculpture, apical margin rounded (Fig. 231). Mesopleural suture distinct, metapleura ridged, sparsely pubescent on upper margin, anteroventral cavity with tuft of pubescence; propodeal carinae parallel, sides of propodeum pubescent. Segment 1 of gaster obscured by a ring of dense pubescence at base of tergite 2, visible in lateral view, tergite 2 the largest, gaster impunctate, hypopygium pronounced, ventral spine with subbasal hairs. Legs long, slender, coxae elongate, weakly swollen basally, narrow apically, femora swollen basally, apical half narrow, tibiae as long as tarsi. Wings broad apically, surface pubescent, apical margins with a fringe of hairs, radial cell of forewing closed on margin, veins *M* and *Rs+M* indicated, weakly pigmented. Colour: antenna dark orange-yellow, apical segments same colour as basal segments, in some specimens yellowish apically, head, thorax and gaster chestnut-brown, gaster orange-yellow, legs yellow.

♀ unknown.

MATERIAL EXAMINED

Holotype ♀, **Zaire**: P.N.A., 30.i.–21.xii.1953 (*P. Vanschuytbroeck & J. Kekenbosh*) (MRAC).

Paratypes. **Zaire**: 10 ♀, same data as holotype except dates (MRAC).

REMARKS. A very distinctive species with thread-like antenna (Fig. 230).

Rhoptromeris pagasa sp. n.

(Figs 231, 233, 278)

DESCRIPTION. ♀. Antenna 13-segmented, segment 3 shorter than 4, 4 and 5 equal in length, 6–13 subequal

in length, with rhinaria, not forming a distinct clavate shape (Fig. 278). Face, viewed frontally, with eyes measured medially as close together as height of an eye, face with sparse scattered hairs, malar groove distinct, mandibular area with sparse hairs. Pronotal plate with a transverse furrow between anterior and posterior parts, furrow closed on lateral margins (Fig. 233); either side of plate with tufts of pubescence. Mesoscutum smooth, polished, notaulices absent; lateral bars of scutellum polished, scutellar fovea kidney-shaped, polished; scutellar disc with aberrant sculpture laterally, almost smooth, rugose apically, scutellar cup elongate, rim thick (*cf.* Fig. 231), apex of disc rounded. Mesopleural suture distinct, metapleura smooth, anteroventral cavity with a tuft of hairs. Propodeal carinae almost parallel, weakly bowed apically, lateral margins pubescent. Segment 1 of gaster, viewed laterally, crescent-shaped, partially obscured by a ring of dense pubescence at base of tergite 2, tergites 2–4 visible in lateral view, tergite 2 the largest, occupying almost whole visible area, segments 3 and 4 only partially visible, gaster impunctate, hypopygium pronounced, visible part of ventral spine as long as base of hypopygium. Legs normal, coxae longer than broad, swollen basally, femora swollen from base for two-thirds of length, tibiae widest apically, meta-tarsi slender, longer than remaining combined tarsal segments. Wing surfaces pubescent, apical margins with a fringe of hairs, radial cell closed on margin, longer than broad, veins *M* and *Rs+M* not indicated. Colour: antenna yellow basally, 8 apical segments darker than basal segments, head, thorax and gaster orange-brown, legs yellow.

♂ unknown.

MATERIAL EXAMINED

Holotype ♀, **Cameroun**: Nkoemvon, malaise trap, ix.1979 (*D. Jackson*) (BMNH).

Paratypes. **Zaire**: 10 ♀ (MRAC). **Cameroun**: 1 ♀, same locality as holotype, different date (BMNH).

REMARKS. This species is closely related to *temesa* but can be separated by the relative lengths of antennal segments 3 and 4 and the form of the pronotal plate.

Rhoptromeris pallidus sp. n.

(Figs 246, 264)

DESCRIPTION. ♀. Antenna 13-segmented, segment 3 as long as 4+5, 5 and 6 subequal in length, 7–13 forming a distinct club. Head, viewed frontally, with eyes further apart measured medially than height of eye, eyes diverging posteriorly, face with sparse hairs extending from base of antennal sockets to clypeal area, malar grooves distinct, anterior tentorial pits not clearly defined, apex of clypeus with long scattered hairs extending over mandibles. Pronotal plate with two medial fovea between anterior and posterior parts, separated by a broad medial bridge, closed on lateral margins (*cf.* Fig. 246). Mesoscutum smooth, polished, notaulices absent; lateral bars of scutellum polished basally, broader than long, scutellar fovea polished, scutellar disc rounded apically, surface with sparse weak radiating striae (very weak in some specimens); scutellar cup raised, long, narrow, rim almost as wide as inner surface of cup. Mesopleural suture distinct, metapleura with weak ridges, anteroventral cavity with minute hairs. Propodeal carinae converging basally, weakly bowed apically, propodeum pubescent medially, with tufts of pubescence on lateral margins. Segment 1 of gaster obscured by a ring of hairs at base of tergite 2, tergite 2 the largest in lateral view, tergites 3–4 partially visible, apex of 2 and visible parts of 3 and 4 finely punctate, hypopygium broad, with subbasal hairs, ventral spine short. Legs normal, mid and hind coxae elongate, swollen basally, shorter than the femora, femora widest apically, shorter than tarsi. Wing surfaces pubescent, with a long apical fringe of hairs on apical margins, radial cell of forewing closed on margin, veins strongly pigmented, *M* and *Rs+M* absent. Colour: antenna and legs pale yellow, head, thorax and gaster light orange-yellow (in some specimens apical segments of antenna darker than basal segments).

♂. Antenna 15-segmented, segment 3 shorter than each of following segments, 4th curved and swollen apically (Fig. 264).

MATERIAL EXAMINED

Holotype ♀, **Nigeria**: Ibadan (*B. R. Critchley*) (MRAC).

Paratypes. **Nigeria**: 5 ♀, 4 ♂ same data as holotype (BMNH). **Zaire**: 1 ♀ (MRAC).

REMARKS. This species is not closely related to any of those described in this paper. The fovea on the pronotal plate appear closed but are not well defined.

***Rhoptromeris persius* sp. n.**

(Figs 250, 251, 252)

DESCRIPTION. ♀. Antenna 13-segmented, segment 3 longer than 4, 4–6 subequal in length, 7–13 forming a weak club, the segments swollen medially (Fig. 251). Face, viewed frontally, with eyes as far apart measured medially between eyes as height of an eye, sparse scattered hairs extending from outer margins of antennal sockets to clypeus, malar grooves distinct, lower face with scattered hairs. Pronotal plate with a transverse groove between anterior and posterior parts, closed on lateral margins (cf. Fig. 250). Mesoscutum smooth, polished, notaulices absent; lateral bars of scutellum polished basally, weakly striated laterally, scutellar fovea polished, kidney-shaped, scutellar disc with radiating striae, apex rounded, scutellar cup longer than broad, polished, rim light-coloured, apex of cup with a fovea. Mesopleural suture distinct, metapleura weakly ridged, anteroventral cavity with a distinct tuft of hairs. Propodeal carinae weakly bowed apically, lateral margins pubescent. Segment 1 of gaster in the form of a crescent-shaped ring, crenulate, tergite 2 the largest in lateral view, impunctate, with a ring of pubescence at its base, tergite 3 only just visible, hypopygium not prominent, ventral spine very short. Legs normal, mid and hind coxae swollen basally, longer than broad, trochanters long, femora swollen basally, tibiae widest at apex. Wing surfaces pubescent, margins with a fringe of hairs, radial cell of forewing closed on margin, long, narrow (Fig. 252), veins *M* and *Rs+M* absent. Colour: antenna orange-yellow basally, brownish apically, head and thorax reddish brown, gaster orange-brown, legs yellow.

♂ unknown.

MATERIAL EXAMINED

Holotype ♀, **Zaire**: 25.vi.1951 (*J. Verschur*) (MRAC).

REMARKS. Only one specimen of this species has been seen. It is close to *equalis* but separated by the antennal characters, see key.

***Rhoptromeris punctata* sp. n.**

(Figs 239, 246, 248)

DESCRIPTION. ♀. Antenna 13-segmented, segment 3 as long as 4+5, segment 4 longer than 5, each more than twice as long as wide, 7–13 forming a distinct club (Fig. 248). Face, viewed frontally, with eyes further apart than height of an eye measured medially, face with a row of hairs extending from outer margins of antenna to clypeus, malar grooves distinct, lower face with scattered hairs. Pronotal plate with two foveae, one either side of medial bridge between anterior and posterior parts of plate, closed on lateral margins (cf. Fig. 246). Pronotum either side of plate with sparse hairs. Mesoscutum smooth, polished, notaulices absent, a row of scattered hairs in their place, lateral bars of scutellum smooth, polished, scutellar disc polished, rounded apically, cup narrow, elliptical. Mesopleural suture weak though complete, metapleura with a few weak impressions, anteroventral cavity with a tuft of hairs. Propodeal carinae parallel, pubescent on lateral margins. Segment 1 of gaster in the form of a short crenulate ring, tergite 2 the largest, with a ring of pubescence at base, not complete on dorsal surface, tergites 2–4 of gaster visible in lateral view, visible parts of 3 and 4 punctate, hypopygium weakly protruding, ventral spine short. Legs of normal proportions, coxae weakly swollen basally, femora medially swollen, tibiae broad apically, tarsi short, equal in length to tibiae; femora, tibiae and tarsi with sparse pubescence. Wing surface pubescent, with a long apical fringe of hairs on frontal and apical margins, radial cell of forewing closed on margin, veins thick, cell small (cf. Fig. 239), veins *M* and *Rs+M* not indicated. Colour: antenna yellowish, apical segments darker, head, thorax and gaster chestnut-red-brown, legs yellow.

♂ unknown.

MATERIAL EXAMINED

Holotype ♀, **Zaire**: Kivu, Sake, v.1938 (*J. Ghesquière*) (MRAC).Paratypes. **Zaire**: 2 ♀ (MRAC).

REMARKS. Very closely related to *enna* but distinguished by antennal segments 4–6 and the scutellar disc.

***Rhoptromeris rufulus* sp. n.**

(Figs 246, 258, 260)

DESCRIPTION. ♀. Antenna 13-segmented, segment 3 longer than 4, 4 longer than 5, 5 subequal to 6, 7–13 forming a club (Fig. 260). Head, viewed frontally, with eyes converging closer together on approach to

lower face, face with a line of scattered hairs extending from outer margins of antennal sockets to clypeal area, malar groove distinct, lower face and frontal area with long scattered hairs. Pronotal plate pronounced, anterior and posterior parts connected by a medial bridge with a fovea on either side of bridge, closed on lateral margins (cf. Fig. 246); lateral margins of pronotum with a tuft of pubescence either side of plate. Mesoscutum polished, notaulices absent, a row of scattered hairs in their place, anterior parallel lines weakly indicated; lateral bars of scutellum polished, scutellar fovea kidney-shaped, scutellar disc with weak radiating ridges laterally, stronger apically, apex rounded, scutellar cup semi-oval, apex with a small fovea, basal area with minute pits. Mesopleural suture distinct, metapleura weakly ridged, anteroventral cavity with a few hairs. Propodeal carinae weakly bowed, lightly pubescent laterally. Segment 1 of gaster in form of a crenulate ring, partially obscured by a dense ring of hairs at base of tergite 2, tergites 2–3 visible in lateral view, tergite 2 the largest, segment 3 punctate, hypopygium not prominent, ventral spine with subequal hairs, ovipositor short. Legs normal, coxae not noticeably swollen, femora swollen basally, tibiae slender, widest apically, tarsi a little shorter than tibiae. Wing surfaces pubescent, margins with a fringe of hairs, radial cell of forewing closed, veins *M* and *Rs+M* not indicated. Colour: antenna yellow basally, darker apically except for segment 13 yellow, head and thorax dark brown, legs yellow.

♂. Antenna 15-segmented, segment 4 twisted, larger than 3 (Fig. 258).

MATERIAL EXAMINED

Holotype ♀, **Zaire**: 26.xi.1952 (*H. de Saeger*) (MRAC).

Paratypes. **South Africa**: 5 ♀ (BMNH). **Zaire**: 49 ♀, 1 ♂ (MRAC).

REMARKS. This species is distinguished from the closely related *bicolor* by the colour pattern of the antenna (see p. 296). The contrast of the colour pattern varies slightly, and the number of completely yellow apical segments also varies. It is possible that two species are involved.

Rhoptromeris rwanki sp. n.

(Fig. 272)

DESCRIPTION. ♀. Antenna 13-segmented, segment 3 shorter than 4, 4 longer than 5, 5 equal in length to 6, segments 7–13 forming a very weak club, each segment swollen medially, with rhinaria (cf. Fig. 272). Head, viewed frontally, with eyes further apart measured medially than height of an eye, a row of hairs extending from outer margin of antennal sockets to clypeal area, malar grooves distinct. Pronotal plate with two fovea, one either side of medial bridge connecting anterior and posterior parts. Pronotum either side of plate with tufts of pubescence. Mesoscutum smooth, polished, notaulices absent. Scutellum rounded apically, lateral bars polished dorsally, scutellar fovea shallow, smooth, polished, lateral margins of scutellar disc with aberrant ridged sculpture, scutellar cup long, narrow, apex with a fovea, with small pits alongside inner margin of cup rim. Mesopleural suture distinct, metapleura polished, anteroventral cavity with a tuft of pubescence. Propodeal carinae weakly bowed medially, densely pubescent medially and laterally. Segment 1 of gaster distinct, a little wider than long, crenulate, tergite 2 the largest in lateral view, remaining segments not visible, base of tergite 2 with a ring of dense pubescence, sparse on dorsal surface, hypopygium not pronounced, ventral spine short, with subbasal hairs. Legs slender, pubescent, mid and hind coxae elongate, weakly swollen basally, femora weakly swollen basally, tibiae slender, broad apically, tarsi normal. Wing surfaces pubescent, with apical hair fringe, forewing rather blunt apically, radial cell of forewing closed on margin, almost as broad medially as long measured medially, veins *M* and *Rs+M* indicated by weak pigmentation. Colour: antenna yellow basally, dark medially, apical 2–3 segments yellowish, head, thorax and gaster dark chestnut-red, legs yellow.

♂ unknown.

MATERIAL EXAMINED

Holotype ♀, **Zaire**: N. Lac Kivu, Rwanki, 15.ii.1952 (*J. V. Leroy*) (MRAC).

Paratypes. **Zaire**: 8 ♀ (MRAC).

REMARKS. This species is very similar to *cephesus* but the antennae are not white apically and the scutellar disc has weakly ridged sculpture.

Rhoptromeris rutshuris sp. n.

(Figs 236, 275)

DESCRIPTION. ♀. Antenna 13-segmented, filiform, segment 3 shorter than 4, 4 and 5 subequal in length, 6–13 with rhinaria, weakly swollen medially, apical segments white (Fig. 236). Face, viewed frontally, with

eyes converging towards clypeus, scattered hairs extending from antennal sockets to clypeal margin, malar grooves and anterior tentorial pits distinct, mandibles pubescent. Pronotal plate, viewed frontally, with lateral margins and dorsal margin straight, posterior and anterior parts fused medially by a narrow medial bridge separating two fovea which are closed on lateral margins (*cf.* Fig. 275). Mesoscutum smooth, polished, notaulices absent; lateral bars of scutellum broader than long, polished on dorsal surface, scutellar fovea semi-oval, polished, scutellar disc with weak radiating ridges laterally and apically, apical margin of disc rounded; scutellar cup slightly longer than wide, with a large fovea apically and smaller fovea medially, rim of cup not pronounced. Mesopleural suture distinct, metapleura with distinct ridges, anteroventral cavity with a tuft of pubescence. Mesopleural suture bowed apically, pubescent either side of propodeum. Segment 1 of gaster in the form of a crenulate ring, a little longer than wide, tergite 2 the largest viewed laterally, with a ring of hairs at its base, tergite 3 partially visible, apex of tergite 2 and visible parts of tergite 3 punctate, hypopygium not prominent, ventral spine short. Legs normal, femora swollen in basal two-thirds, tibiae widest apically, as long as femora, shorter than tarsi. Wing surfaces pubescent, with a fringe of hairs on front and apical margins, radial cell of forewing closed on margin, narrow basally, veins *M* and *Rs+M* not indicated. Colour: antenna yellowish basally, brownish medially, apical segments pale yellow, head, thorax and gaster orange-brown, legs yellow.

♂ unknown.

MATERIAL EXAMINED

Holotype ♀, **Zaire**: Rutshura, xi.1937 (*J. Ghesquière*) (MRAC).

Paratypes. **Cameroun**: 2 ♀ (BMNH). **Zaire**: 38 ♀ (MRAC).

REMARKS. Distinguished from the related species *agis* by the punctate segments of the gaster and the white apical segments of the antenna.

Rhoptromeris sinis sp. n.

(Fig. 279)

DESCRIPTION. ♀. Antenna 13-segmented, segments 3–6 subequal in length, 7–13 forming a weak club, each club segment with rhinaria (Fig. 279). Face, viewed frontally, with eyes converging, further apart than height of an eye, face with long sparse hairs scattered in area between antennal sockets and clypeus, malar grooves distinct. Pronotal plate with two laterally closed fovea, one on either side of medial bridge between anterior and posterior parts, outer parts of plate angular, either side of plate with tufts of pubescence. Mesoscutum smooth, polished, notaulices absent, scattered hairs present; lateral bars of scutellum polished dorsally, scutellar foveae kidney-shaped, polished, scutellar disc rounded apically, surface with weak to strongly radiating sculpture; scutellar cup long, elliptical, apex with a small fovea, the anterior area with transverse striae. Mesopleural suture distinct, metapleura ridged, anteroventral cavity bare. Propodeal carinae parallel, pubescent dorsally and laterally. Segment 1 of gaster broader than long, crenulate, tergite 2 the largest in lateral view, with a ring of dense pubescence at its base, complete on dorsal surface, segment 3 partially visible, gaster weakly punctate though not conspicuously, hypopygium weakly projecting, ventral spine with sparse hairs basally. Legs normal, mid and hind coxae elongate, weakly swollen basally, pubescent medially, femora, tibiae and tarsi subequal in length, femora swollen in basal half, tibiae broader apically than basally, tibiae and tarsi pubescent with a hair fringe along margins. Wing surfaces pubescent, with apical fringe of hairs, radial cell of forewing closed on margin, veins *Rs* longer than *2r*, veins *M* and *Rs+M* indicated as folds, with a weak trace of pigmentation. Colour: antenna pale yellow basally, darker apically, head, thorax and gaster reddish brown, legs yellow.

♂ unknown.

MATERIAL EXAMINED

Holotype ♀, **Zaire**: N. Lac Kivu, Rwanki, 15.ii.1952 (*J. V. Leroy*) (MRAC).

Paratypes. **Cameroun**: 1 ♀ (BMNH). **Zaire**: 17 ♀ (MRAC).

REMARKS. This species is difficult to separate from *bupalus* and *attis*; however, the third antennal segment is equal in length to and not longer than the fourth as in the other species.

Rhoptromeris temesa sp. n.

(Figs 275, 282, 283, 284)

DESCRIPTION. ♀. Antenna 13-segmented, segment 3 shorter than 4, 5 a little shorter than 4, 6–13 with rhinaria, the club only discernible by the presence of rhinaria, very weakly swollen medially (Fig. 282).

Head, viewed frontally, with eyes as far apart measured medially as the height of an eye, face with scattered hairs, prominent around malar grooves, clypeus and mandibles. Pronotal plate with two fovea separated by a medial bridge between anterior and posterior parts, with a tuft of pubescence on either side (*cf.* Fig. 275). Mesoscutum smooth, polished, lateral bars polished, scutellar fovea polished, weakly sculptured; scutellar disc with radiating and ridged sculpture apically, apex rounded; scutellar cup large, elongate, broad, apex with a transverse fovea, basal half polished, with weak sculpture, rim of disc with a few long setae (Fig. 283). Mesopleural suture distinct, straight, metapleura polished on upper margins, ridged apically, anteroventral cavity with minute hairs. Propodeal carinae parallel, thick, pubescent laterally. Segment 1 of gaster completely hidden, ring of hairs at base of tergite 2 short and thick, tergite 2 the largest in lateral view, punctate, segments 3 and 4 not visible, hypopygium short, squarish apically, ventral spine short. Legs slender, normal shape, sparsely pubescent. Wing surfaces pubescent, apical margins with a fringe of hairs. Forewing broad apically, radial cell closed on margin, longer than broad (Fig. 284), veins *M* and *Rs+M* not pigmented, visible as folds. Colour: antenna orange-brown basally, apical segments darker, head blackish red, thorax and gaster chestnut-red, legs yellow.

♂ unknown.

MATERIAL EXAMINED

Holotype ♀, **Zaire**: N. Lac Kivu, Rwanki, 15.ii.1952 (*J. V. Leroy*) (MRAC).

REMARKS. A distinctive species which can be separated from *rutshuris* by the strong radiating sculpture of the scutellar disc and the broad median bridge on the pronotal plate.

Rhoptromeris thales sp. n.

(Figs 228, 265, 266)

DESCRIPTION. ♀. Antenna 13-segmented, segment 3 shorter than 4, 4 and 5 equal in length, 6 shorter than 5, 7–13 with rhinaria, each segment wider apically than basally (Fig. 266). Face, viewed frontally, with eyes as close together measured medially as height of an eye, face with sparse hairs between outer margins of antennal sockets and clypeal area, malar grooves and anterior tentorial pits distinct. Pronotal plate with two fovea, one either side of medial bridge between anterior and posterior parts, lateral margins of fovea closed (*cf.* Fig. 228), either side of plate with sparse hairs. Mesoscutum smooth, polished, notaulices absent; lateral bars of scutellum polished, scutellar fovea polished, kidney-shaped, wider than long; scutellar disc rounded apically, lateral margins with widely spaced radiating sculpture, apical surface the same; scutellar cup long, narrow, with apical fovea. Mesopleural suture distinct, metapleura weakly ridged, anteroventral cavity with minute hairs. Propodeal carinae bowed medially, propodeum pubescent on dorsal and lateral surfaces. Segment 1 of gaster in the form of a crenulate ring, visible part in the form of a crescent, tergite 2 the largest, base with a dense ring of hairs, tergites 3 and 4 partially visible, gaster impunctate, hypopygium pronounced, ventral spine short. Legs slender, mid and hind coxae elongate, swollen basally, femora swollen basally, tibiae widest apically, longer than femora, slightly longer than tarsi. Wing surfaces pubescent, with apical fringe of hairs, forewing narrow, radial cell elongate, narrow basally, weakly rounded (Fig. 265), closed on margin, veins *M* and *Rs+M* not indicated, folds only present. Colour: antenna yellow basally, apical 7 segments darker, head, thorax and gaster blackish brown, legs yellow.

♂ unknown.

MATERIAL EXAMINED

Holotype ♀, **Zaire**: Kivu, Rutshuru, Lubiriz, 1,285 m, 13.vii.1935 (*G. F. de Witte*) (MRAC).

Paratypes. **South Africa**: 2 ♀ (BMNH). **Zaire**: 8 ♀ (MRAC).

REMARKS. This species can be confused with those having a thread-like antenna, but the length to breadth ratios of the segments are not as great and the club segments are discernible not only by the rhinaria being distinct but by the very weak but apparent clavate form of each segment (Fig. 266).

Rhoptromeris velia sp. n.

(Fig. 250)

DESCRIPTION. ♀. Antenna 13-segmented, segment 3 very slightly shorter than 4, almost equal in length, 5 shorter than 4, equal in length to 6, 8–13 subequal in length, swollen medially, with distinct rhinaria. Head, viewed frontally, with eyes converging, further apart measured medially than height of an eye, with a row of hairs extending from outer margin of antennal sockets to clypeal area, anterior tentorial pits and malar grooves distinct. Pronotal plate with a transverse groove medially between anterior and posterior parts of

plate, closed on lateral margins (*cf.* Fig. 250). Pronotum either side of plate pubescent. Mesoscutum smooth, polished, notaulices absent. Scutellar fovea transversely long, kidney-shaped, deep, polished; lateral bars of scutellum polished; scutellar disc smooth laterally to weakly reticulate with radiating broken rugose sculpture apically, scutellar cup almost oval, with a wide rim, apex with a small semi-circular fovea, inner margin of rim with a few small fovea or pits. Mesopleural suture distinct, metapleura weakly ridged, anteroventral cavity bare. Propodeal carinae subparallel, weakly converging apically, lateral margins of propodeum with dense tufts of pubescence. Segment 1 of gaster obscured by a ring of dense hairs at base of tergite 2, in the form of a crescent-shaped ring, crenulate; tergite 2 the largest, occupying almost whole of visible lateral area, tergites 3 and 4 only partially visible, gaster impunctate, hypopygium weakly visible, ventral spine short, with sparse subbasal hairs present. Legs slender, mid and hind coxae elongate, swollen medially, femora swollen basally, tibiae widest apically, tarsi longer than tibiae. Wing surfaces pubescent, margins with a fringe of hairs, apex of wings broad, radial cell of forewing closed on margin, veins *M* and *Rs+M* not indicated. Colour: antenna yellowish orange basally, apical segments darker, head, thorax and gaster chestnut-brown, legs yellow.

♂ unknown.

MATERIAL EXAMINED

Holotype ♀, **South Africa**: Cape Province, Mossel Bay, 18–30.ix.1921 (*R. E. Turner*).

Paratypes. **South Africa**: 1 ♀ (BMNH). **Zaire**: 2 ♀ (MRAC).

REMARKS. This species is distinguished from *affer* by the shape of the club segments, which are weakly pronounced, whereas in *affer* the club is sharply defined.

Rhoptromeris zetes sp. n.

(Figs 249, 250)

DESCRIPTION. ♀. Antenna 13-segmented, segments 3–6 subequal in length, 7–13 forming a weak club, each club segment with rhinaria and clearly wider apically than basally. Face, viewed frontally, with eyes weakly converging, further apart measured medially than height of an eye, scattered hairs extending from outer margins of antennal sockets to clypeus. Pronotal plate with a transverse groove between anterior and posterior parts, closed on lateral margins (Fig. 250), lateral margins of pronotum with tufts of pubescence either side of pronotal plate. Mesoscutum smooth, polished, notaulices absent; lateral bars of scutellum polished, scutellar disc smooth laterally, ridged apically, apical margin of disc rounded; scutellar cup elongate, narrow apically, rim of cup paler than inner surface, apex with minute fovea. Propodeal carinae parallel, lateral margins of propodeum pubescent. Mesopleural suture distinct, metapleura with complete transverse ridges, anteroventral cavity with a tuft of short hairs. Propodeal carinae subparallel, weakly bowed apically, strongly pubescent laterally. Segment 1 of gaster in the form of a crenulate ring, partially obscured by a ring of short hairs at base of tergite 2, tergite 2 the largest in lateral view, punctate apically, visible parts of tergites 3 and 4 punctate, hypopygium small. Ventral spine short (Fig. 249). Legs normal, mid and hind coxae elongate, coxae swollen basally, shorter than femora, femora widest apically, tarsi longer than tibiae. Wing surfaces pubescent, apical margin with a hair fringe, radial cell of forewing closed, veins *M* and *Rs+M* weakly indicated by pigmentation. Colour: antenna yellow basally, 7–11 brownish, 12–13 light yellow, almost white, head and thorax chestnut-brown, gaster dark orange-yellow, legs yellow.

♂ unknown.

MATERIAL EXAMINED

Holotype ♀, **Zaire**: Kivu, Nyongera, near Rutshuri, Butamba, 1,218 m, 17.vii.1935 (*C. F. de Witte*) (MRAC).

Paratypes. **Zaire**: 9 ♀ (MRAC).

REMARKS. This species is similar to *persius* but has fine punctures on tergites 2–4 of the gaster and the apical segments of the antenna are yellowish.

Rhoptromeris zeus sp. n.

(Fig. 229)

DESCRIPTION. ♀. Antenna 13-segmented, segment 3 shorter than 4, 4 longer than 5, 5–7 each progressively shorter than preceding segment, 8–13 with rhinaria, swollen medially (Fig. 229). Face, viewed frontally, with eyes as far apart measured medially than height of an eye, face with a few sparse hairs, malar grooves and anterior tentorial pits distinct. Pronotal plate with a transverse groove medially between anterior and

posterior parts, closed on lateral margins, either side of plate with tufts of pubescence. Mesoscutum smooth, polished, notaulices absent; lateral bars of scutellum polished, broad basally, scutellar foveae kidney-shaped, scutellar disc polished on lateral margins, apex rounded, apical surface with weak rugae; scutellar cup long, narrow, rim pale, apex with a small fovea. Mesopleural suture distinct, metapleura with weak ridges posteriorly, anteroventral cavity with an excrescence. Propodeal carinae parallel, pubescent on lateral margins. Segment 1 of gaster very slightly longer than broad, petiolate, in the form of a crenulate ring, tergite 2 the largest in lateral view, with a dense ring of hairs at base, not complete on dorsal surface, tergites 3 and 4 partially visible, gaster impunctate, hypopygium pronounced, long, broad apically in lateral view, ventral spine short. Legs normal, mid and hind coxae elongate, swollen medially, femora swollen in basal two-thirds, tibiae longer than femora, widest at apex, tarsi slightly longer than tibiae. Wing surfaces pubescent, with long hair fringe on frontal and apical margins, radial cell of forewing closed on margin, very narrow basally, veins *M* and *Rs+M* weakly indicated by pigmentation. Colour: antenna yellowish basally, becoming yellowish brown apically, head, thorax and gaster orange-brown, legs yellow. ♂ unknown.

MATERIAL EXAMINED

Holotype ♀, **Zaire**: Massif Ruwenzori, Kalonge, 260 m, Ruiss Karambura, affl. Katauleko, 30.i.–ii.1953 (*P. Vanschuytbroeck & J. Keknbosch*) (MRAC).

Paratypes. **Zaire**: 2 ♀ (MRAC).

REMARKS. Separated from other species by the six-segmented club and the very pronounced hypopygium.

STENTORCEPS Quinlan

Stentorceps Quinlan, 1984: 479. Type-species: *Stentorceps tubicen* Quinlan, by original designation and monotypy.

DIAGNOSIS. ♀ antenna 13-segmented, segment 3 subequal to 4+5, 4 and 5 subequal in length, 7–13 forming a club (Fig. 281), darker than segments 1–6; ♂ antenna 15-segmented, 4th segment grossly swollen (Fig. 288). Head, viewed frontally, with two pyriform protuberances, one each side of face on inner orbits, occupying whole space between the half of area between eyes (Figs 31, 32) except for a medial furrow and a narrow gap between inner margins of protuberances and antenna. Supraclypeal area of face with a large protrusion shaped like the mouth of a trumpet, slightly narrower at its base (Fig. 32), mandibles very long, apically truncate, with scissors-like action (Fig. 289), clypeus long, narrow, with a few sparse setae (Fig. 289). Pronotal plate projected forward, posterior and anterior parts separated medially by a transverse ridge with two shallow foveae, not open on lateral margins. Segments 1–4 of gaster visible in ♀, and 1–6 in ♂, apical segments punctate (Fig. 286).

Stentorceps tubicen Quinlan

(Figs 31, 32, 281, 284, 285, 286, 287, 288, 289)

Stentorceps tubicen Quinlan, 1984: 479. Holotype ♀, KENYA (BMNH) [examined].

DESCRIPTION. ♀. Antenna 13-segmented, segment 3 subequal to 4+5, 4 and 5 subequal in length, 7–13 forming a club (Fig. 281), darker than flagellar segments 1–6. Head, viewed frontally, as broad as long, eyes as far apart measured medially as height of an eye, the two protuberances occupying inner orbits, being separated medially, the trumpet-shaped protrusion on face with outer rim, viewed dorsally, light-coloured, lateral margins with a ring of setae extending past rim (Fig. 31); lower face, mandibles and clypeus with long scattered setae; pronotum either side of pronotal plate with tufts of pubescence. Mesoscutum smooth, polished, notaulices absent, in their place a row of hairs, scutellar foveae smooth, shallow, lateral bars smooth, scutellar disc polished laterally, apex weakly conical, surface with reticulate-rugose sculpture (Fig. 284), scutellar cup long, elliptical, with a large apical fovea. Propodeal carinae parallel, converging apically, lateral margins of propodeum with tufts of pubescence. Mesopleura smooth, polished, mesopleural suture complete, metapleura ridged (Fig. 285), anteroventral cavity with a few minute hairs (Fig. 285), open basally. Segment 1 of gaster in the form of a short strigose ring, partially obscured by a ring of hairs at base of tergite 2, tergite 2 the largest, viewed laterally, ring of hairs at base incomplete on dorsal surface, hypopygium prominent, ovipositor short. Forewing broad, rounded apically, hindwing narrow, wing surfaces densely pubescent, apical margins with a fringe of hairs, radial cell of forewing closed on margin viewed with a Leitz stereo microscope [under the electron microscope it appears open, this is due to the presence of pigmentation (Fig. 287)]. Legs robust, coxae weakly swollen, with scattered pubescence, femora broad medially, margins of mid and hind coxae with a sparse hair fringe,

tibiae pubescent, tarsi 5-segmented. Colour: head and thorax blackish brown, gaster chestnut-red basally, otherwise brown, mandibles yellowish, antenna yellow basally, club segments brownish.

♂. Antenna 15-segmented, 4th segment grossly swollen (Fig. 288); segments 3–6 of gaster attached tangentially to tergite 2 (Fig. 286).

MATERIAL EXAMINED

Holotype ♀, **Kenya**: Nairobi, Karen, 6,000m, i.1982–v.1982 (*C. F. Dewhurst*) (BMNH).

Paratypes. **Kenya**: 7 ♀, 5 ♂, same data as holotype (BMNH).

REMARKS. No other species have been seen that can possibly be assigned to this genus.

TRICHOPLASTA Benoit

Trichoplasta Benoit, 1956: 537. Type-species: *Trichoplasta basilewskyi* Benoit, by original designation and monotypy.

DIAGNOSIS. ♀ antenna 13-segmented, pubescent, with a 6–9-segmented club usually darker than basal flagellar segments, segment 3 generally shorter than 4, ♂ antenna 15-segmented, segment 3 shorter than following segments, segment 4 elongate, sometimes swollen distally (Fig. 308). Head, viewed frontally, rounded, frons raised, malar space with a subocular suture with carinae and weak striations on lower side. Pronotal plate similar to that of *Rhoptromeris*, i.e. lateral fovea either side of median bridge between anterior and posterior parts closed (Fig. 300), medial bridge generally narrow. Scutellar disc produced, overhanging propodeum, scutellar cup with a large fovea on lower half. Segment 1 of gaster visible, not obscured by dense woolly ring of pubescence at base of tergite 2, apical segments usually punctate. Wing surfaces densely pubescent, usually narrow, hair margins along apical margins long, radial cell of forewing open or closed on margin, not deep. Segment 1 of gaster visible, not widened at either end, tergite 2 with a dense hairy ring basally, apical segments of gaster generally with dense puncturation (Fig. 334). Legs usually slender.

DISTRIBUTION

World-wide except Neotropical region.

REMARKS. This genus is closely related to *Rhoptromeris* and *Stentorceps* by the form of the pronotal plate being common to all three genera, but is separated by the apomorphic scutellar prolongation.

Key to the Afrotropical species of *Trichoplasta* Benoit

Females

- 1 Radial cell of forewing open on front margin (Fig. 294); gaster punctate (Fig. 334); ring of pubescence at base of tergite 2 complete on dorsal surface (Fig. 334) 2
- Radial cell of forewing closed on front margin (Fig. 342); gaster impunctate; ring of pubescence at base of tergite 2 not complete on dorsal surface 7
- 2 Antenna with a 7-segmented club (Fig. 303) 3
- Antenna with 8–9-segmented club (Figs 328, 330) 6
- 3 Scutellar disc beak-shaped apically, surface punctate-reticulate laterally (Fig. 298), polished apically, long, narrow, scutellar cup large, oval, outer rim pale, lower half of cup with a large circular fovea (Fig. 298); antennal club sharply defined (Fig. 303); pronotum smooth, polished *rufus* sp. n. (p. 319)
- Scutellar disc beak-shaped or conical, surface reticulate-rugose (Fig. 296); scutellar cup variable in shape, antennal club either sharply or weakly defined 4
- 4 Antennal club sharply defined (Fig. 296) 5
- Antennal club weakly defined (Fig. 301), antenna short, not as long as distance between front of head and apex of gaster, segment 6 clearly shorter than 7; sides of pronotum polished *medlia* sp. n. (p. 317)
- 5 Antennal segment 3 shorter than 4+5, all segments at least 2.5 × as long as broad; veins *Rs*+*M* of forewing not indicated; metapleural region weakly crenulate *equalis* sp. n. (p. 314)
- Antennal segment 3 subequal to 4+5, all segments less than 2 × as long as broad, *Rs*+*M* distinct; metapleural region strongly ridged (*cf.* Fig. 334) *tanganyikensis* (Weld) (p. 319)
- 6 Antennal club 8-segmented (Fig. 330); ventral border of pronotum strongly striated; pronotal plate rounded on margins of posterior plate (Fig. 325) *octonarius* sp. n. (p. 318)

- Antennal club 9-segmented (Fig. 328); ventral border of pronotum weakly sculptured; pronotal plate angled on margins of posterior plate (Fig. 324), rounded on dorsal margin
novema sp. n. (p. 318)
- 7 Antennal segments 7–13 forming a weak 7-segmented club, each segment with rhinaria (Fig. 337).
Scutellar disc tapering almost to a point (beak-shaped) (Fig. 338), reticulate-rugose
bicolor sp. n. (p. 312)
 - Antenna with 5–6-segmented club 8
 - 8 Antennal club 5-segmented 9
 - Antennal club 6-segmented 13
 - 9 Apex of scutellar disc not beak-shaped (Fig. 320), surface with radiating sculpture; club segments of antenna sharply defined *brevispina* (Masner) (p. 313)
 - Apex of scutellar disc extended to form a spine or beak-shaped protrusion (Fig. 335), surface reticulate-rugose; club segments of antenna weakly or sharply defined 10
 - 10 Club segments of antenna sharply defined (Fig. 336) *longispina* (Masner) (p. 316)
 - Club segments of antenna weakly defined (Fig. 341) 11
 - 11 Antenna completely pale yellow, segments 4–7 subequal in length, club segments very weakly swollen medially, with rhinaria, segment 4 as long or longer than 5 (Fig. 321) 12
 - Antenna with club segments yellow-brown, never completely pale (Fig. 341); scutellum beak-shaped (Fig. 339) *filiformis* sp. n. (p. 315)
 - 12 Head, thorax and gaster blackish brown; pronotum orange-yellow in sharp contrast; antenna distinctly longer than distance between front of head to apex of gaster; scutellar cup large, oval, scutellar disc rugose, apex acutely spined (Fig. 314); pronotal plate, viewed frontodorsally, with anterior plate angled dorsally, medial bridge narrow (cf. Fig. 300)
contrasta sp. n. (p. 314)
 - Head, thorax, gaster and pronotum blackish brown, antenna at most as long as head to apex of gaster, scutellar cup longer than broad, scutellar disc reticulate-rugose, apex of disc sharply but not acutely spined (cf. Fig. 338); pronotal plate, viewed frontodorsally, with anterior plate rounded on margins, not angled, medial bridge broad (Fig. 344) *quinclava* sp. n. (p. 319)
 - 13 Scutellar disc conical, not spine-shaped at apex 14
 - Scutellar disc spine-shaped or in the form of a beak 16
 - 14 Club segments of antenna conspicuous, moniliform (Fig. 306), apical segments twice as long as wide *conica* sp. n. (p. 313)
 - Club segments of antenna inconspicuous (Fig. 346) 15
 - 15 Antennal segments 3 and 4 subequal in length (Fig. 346) *gracilicornis* (Kieffer) (p. 316)
 - Antennal segment 3 clearly shorter than 4 (Fig. 358) *zeus* sp. n. (p. 321)
 - 16 Antennal segment 3 as long as 4.
Scutellar disc reticulate-rugose (cf. Fig. 338); pronotal plate with a broad medial bridge between anterior and posterior parts, posterior part striated (cf. Fig. 344) *extensus* sp. n. (p. 315)
 - Antennal segment 3 clearly shorter than 4 17
 - 17 Scutellar disc areolate, cup small, with a small declined apical fovea (Fig. 350).
Pronotal plate with a narrow medial bridge between anterior and posterior parts of plate; radial cell of forewing triangular in shape (Fig. 347), head, thorax, gaster and legs orange-yellow *testacea* sp. n. (p. 320)
 - Scutellar disc rugose-reticulate, scutellar cup large with apical fovea normal, not declined 18
 - 18 Pronotal plate with a very weak bridge medially between anterior and posterior parts (cf. Fig. 351); apical segments of antenna dark *narrata* sp. n. (p. 317)
 - Pronotal plate with a distinct bridge medially between anterior and posterior parts (cf. Fig. 344); antenna completely pale yellow *unicolora* sp. n. (p. 321)

Males

- 1 Radial cell of forewing open on front margin (Fig. 294); gaster punctate (Fig. 334), with ring of hairs at base of tergite 2 complete on dorsal surface 2
- Radial cell of forewing closed on front margin (Fig. 342); gaster impunctate, ring of hairs at base of tergite 2 incomplete on dorsal surface 4
- 2 Pronotum striate on lateral margins (Fig. 295); antennal segment 3 subequal to 4, 4 swollen

- distally, curved, strongly flattened medially on outer margin, viewed dorsally (*cf.* Fig. 291); gaster densely punctate *equalis* sp. n. (p. 314)
- Pronotum polished on lateral margins, antennal segment 3 distinctly shorter than 4 (*cf.* Fig. 317) 3
- 3 Antennal segment 4 weakly swollen, not curved or flattened medially (Fig. 331); scutellar cup elliptical, longer than broad, scutellar disc reticulate-rugose, apex beak-shaped (Fig. 297) *medlia* sp. n. (p. 317)
- Antennal segment 3 subequal to 4, weakly swollen medially, flattened on outer medial margin (Fig. 317); scutellar cup oval, scutellar disc finely reticulate-rugose, apex conical (Fig. 298) *rufus* sp. n. (p. 319)
- 4 Antennal segment 4 $2.6 \times$ length of segment 3, with very prominent rhinaria, 4–6 darker than basal segments, narrow basally and apically, weakly swollen medially (Fig. 304); scutellar cup almost oval, scutellar disc with radiating striae below scutellar fovea, apex of disc with a distinct spine *narrata* sp. n. (p. 317)
- Antennal segment 4 either curved, swollen medially or basally, or twisted, less than $2.3 \times$ length of 3; scutellar disc cone- or spine-shaped, viewed apically, surface reticulate-rugose, exceptionally with radiating striations 5
- 5 Antennal segment 4 of antenna twisted, flattened on outer margin, swollen apically (sometimes very swollen) (Fig. 308); scutellar disc reticulate-rugose, apex almost pointed (Fig. 307); pronotal plate weakly striated on anterior part (*cf.* Fig. 344) *conica* sp. n. (p. 313)
- Segment 4 of antenna swollen medially or basally, or if curved not strongly swollen at apex; scutellar disc conical or beak-shaped 6
- 6 Segment 4 of antenna, viewed laterally, flattened on outer margin, weakly swollen medially, narrow apically and basally (Fig. 311).
Scutellar disc reticulate-rugose laterally, with weak striae, apex with a long narrow blunt spine (Fig. 310); scutellar cup longer than wide *filiformis* sp. n. (p. 315)
- Segment 4 of antenna swollen basally or curved, or weakly swollen apically; scutellar cup semi-oval 7
- 7 Antennal segment 4, viewed laterally, swollen basally (Fig. 352); scutellar disc with radiating sculpture, apex with a narrow beak-like protuberance (*cf.* Fig. 350) *unicolora* sp. n. (p. 321)
- Antennal segment 4 curved, not swollen (Fig. 313); scutellar disc reticulate-rugose, apex conical (Fig. 314) *contrasta* sp. n. (p. 314)

Trichoplasta bicolor sp. n.

(Figs 337, 338, 344)

DESCRIPTION. ♀. Antenna 13-segmented, very weakly subclavate, the 7-segmented club not sharply defined (Fig. 337), rhinaria visible on all club segments, each club segment weakly swollen medially. Head, viewed frontally, smooth, polished, with long sparse hairs, antennal sockets pronounced, anterior tentorial pits distinct, subocular sulcus distinct, occipital carina weak. Pronotal plate rounded laterally and dorsally on posterior margins, anterior rounded on lateral margin, fovea either side of medial bridge closed on lateral margins (*cf.* Fig. 344), either side of plate with tufts of whitish pubescence. Mesoscutum smooth, polished, lateral bars of scutellum polished dorsally, scutellar fovea shallow, polished; scutellar disc reticulate-rugose, tapering almost to a point (similar to a beak), scutellar cup small, elliptical, with a pale rim, sculptured basally with a large apical fovea on apical third (Fig. 338). Lateral margins of pronotum, mesopleura and metapleura smooth, polished, mesopleural suture distinct, metapleura ridged, pubescent adjacent to hind coxa, nucha ridged, pubescent. Propodeal carinae weakly bowed, obscured by pubescence. Segment 1 of gaster completely obscured by a dense woolly ring of hairs at base of tergite 2, incomplete on dorsal surface, tergite 2 impunctate, remaining tergites not visible in lateral or dorsal view, hypopygium clearly visible. Legs long, slender, coxae elongate, coxae, femora and tibiae pubescent. Wing surface pubescent, with apical hair fringe, radial cell of forewing closed on wing margin, venation pallid, vein *M* (cubitus) not indicated. Colour: head and thorax brownish, gaster chestnut-red, legs orange-yellow, antenna yellow basally, dark apically.

♂ unknown.

MATERIAL EXAMINED

Holotype ♀, **South Africa:** Port St John, Pondoland, 12–30.vi.1923 (*R. E. Turner*) (BMNH).

REMARKS. This species is distinguished by the 7-segmented club (see key).

Trichoplasta brevispina (Masner)

(Figs 318, 320)

Odonteucoila brevispina Masner, 1960: 357. Holotype ♀, KENYA (MRAC) [examined].*Trichoplasta brevispina* (Masner) Nordlander, 1982a: 273.

DESCRIPTION. ♀. Antenna 13-segmented, with a distinct 5-segmented club, segment 3 shorter than 4, 4 longer than 5, 5 shorter than 6, 5–12 subequal in length, 13 as long as 3, apical 5 segments distinctly broader than preceding segments. Head, viewed frontally, with sparse scattered hairs, antennal sockets pronounced, viewed dorsally, subocular sulcus and malar suture distinct, with striae on either side, occipital carinae pronounced dorsally. Pronotal plate rounded posteriorly, viewed frontodorsally, anterior margins angled laterally, medial bridge between anterior and posterior parts separated by a narrow bridge, fovea either side of bridge closed on lateral margins. Mesoscutum smooth, polished, with widely scattered hairs, notaulices absent; lateral bars of scutellum polished, weakly sculptured; scutellar disc with radiating, ridged rugose sculpture, apex conical, not elongated to form a beak-like projection (Fig. 320), sparse hairs present; scutellar cup small, elliptical, rim pronounced, inner surface depressed, sculptured with a small apical fovea. Pronotum smooth, polished, with pubescence either side of pronotal plate; mesopleural suture distinct, metapleura ridged basally with tufts of hair either side of propodeum. Propodeal carinae parallel, nucha longitudinally ridged, pubescent. Segment 1 of gaster crenulate, base of tergite 2 with a ring of hairs, incomplete on dorsal surface, apex of tergite 2 impunctate, segments 3 and 4 not visible, hypopygium weakly projecting. Legs long, slender, coxae and femora with long sparse hairs. Wings narrow, surfaces pubescent, with apical hair fringe, radial cell of forewing closed on margin (Fig. 318), venation very pallid, vein *M* (cubitus) indicated, not pigmented. Colour: head and thorax brownish black, gaster chestnut-red, legs yellowish, coxa yellowish brown, antenna yellowish, club segments yellowish brown.

♂ unknown.

MATERIAL EXAMINED

Kenya: 1 ♀ (holotype), Molo (Mau Escarpment) 2150–2200 m, 11–12.vi.1957 (*Basilewsky & Leleip*) (MRAC).

Zimbabwe: 1 ♀ (BMNH).

REMARKS. This species is distinguished from *gracilicornis* by the sculpture of the scutellar disc and the shape of the radial cell.

Trichoplasta conica sp. n.

(Figs 300, 306, 307, 308, 312)

DESCRIPTION. ♀. Antenna 13-segmented with a distinct, moniliform, 6-segmented club, segment 3 as long as 4+5, 4 longer than 5, 5 shorter than 6, club segments distinctly wider than preceding flagellar segments (Fig. 306). Head, viewed frontally, with sparse scattered hairs, antennal sockets pronounced, subocular suture (malar suture) distinct, with weak aberrant sculpture on either side, occipital carina distinct, with long hairs on lateral margins. Pronotal plate, viewed frontodorsally, with posterior part with a flattened dorsal margin, laterally rounded, anterior and posterior parts fused by a medial bridge, fovea on either side closed (*cf.* Fig. 300). Mesoscutum smooth, polished, anterior parallel lines indicated, notaulices absent, scattered hairs in their place; lateral bars of scutellum polished, scutellar foveae kidney-shaped; scutellar disc reticulate-rugose, conical at apex, not beak-shaped (Fig. 307), cup elliptical, rim pale, a fovea at base and apex. Pronotum smooth, polished either side of pronotal plate; mesopleural suture distinct, metapleura ridged near junction with hind coxa. Propodeal carinae weakly bowed, strongly pubescent on either side, nucha ridged. Segment 1 of gaster crenulate, partially obscured by a ring of hairs at base of tergite 2, apex of tergite 2 with light punctures, tergites 3–5 partially visible in lateral view, punctate, hypopygium pronounced (Fig. 312). Legs short, coxae and tibiae pubescent. Wings broad, surface pubescent, apical hair fringe long, radial cell closed on wing margins, venation of radial cell strongly pigmented, vein *M* (cubitus) indicated, not pigmented. Colour: head, thorax and gaster dark chestnut-red-brown, legs orange-yellow, antenna yellowish basally, apical segments blackish orange-brown.

♂. Antenna 15-segmented, segments 3–15 with rhinaria, segment 3 shorter than 4, 4 shorter than 5, twisted and swollen apically (Fig. 308).

MATERIAL EXAMINED

Holotype ♀, **Zaire:** Mont Hoyo, 1280 m, 7–15.vii.1955 (*P. Vanschuytbroeck*) (MRAC).

Paratypes. **Kenya:** 6 ♀ (BMNH). **Nigeria:** 1 ♀ (BMNH). **Uganda:** 4 ♀ (BMNH). **Zaire:** 153 ♀, 1 ♂ (MRAC).

REMARKS. Like *gracilicornis* this species has a sharply defined 6-segmented club, the apical segments are less than 2 × as long as wide.

***Trichoplasta contrasta* sp. n.**

(Figs 300, 313, 314, 321)

DESCRIPTION. ♀. Antenna 13-segmented, filiform with a very weak 5-segmented club, segment 3 shorter than 4, 4 longer than 5, 5–7 subequal in length, club segments 8–13 with rhinaria (Fig. 321). Head, viewed frontally, with scattered hairs, antennal sockets pronounced, frontal region not raised, malar suture distinct, not pronounced, occipital carina visible dorsally, obscured laterally by dense pubescence either side of pronotal plate. Pronotal plate, viewed dorsally, with anterior margin rectangular, posterior margin rounded, medial bridge between anterior and posterior parts of plate narrow, fovea either side closed laterally (cf. Fig. 300). Pronotum smooth, polished laterally (orange in colour), mesopleural suture distinct, metapleura weakly sculptured on lower margin; mesoscutum smooth, polished, with scattered hairs in place of notaulices; lateral bars of scutellum smooth, scutellar foveae kidney-shaped; scutellar cup pear-shaped, with a large fovea apically, scutellar disc reticulate-rugose, apex acute, beak-shaped (Fig. 314). Propodeal carinae parallel, weakly pubescent medially, densely pubescent on lateral margins, nucha ridged. Segment 1 of gaster obscured by a ring of pubescence at base of tergite 2, 3 and 4 visible in lateral view, gaster impunctate, hypopygium not protruding. Legs long, slender, coxae elongate, moderately pubescent. Wings densely pubescent, with apical fringe of hairs, radial cell of forewing closed on wing margin, narrow basally, wide apically, venation dark yellow. Colour: head brownish black, pronotum orange-yellow, mesoscutum and scutellum blackish, gaster chestnut-brown. Legs yellowish orange, antenna yellowish orange.

♂. Antenna 15-segmented, filiform, segment 3 swollen basally, twisted medially (Fig. 313).

MATERIAL EXAMINED

Holotype ♀, **Nigeria:** Ondu State, 21.iii.1971 (J. T. Medler) (BMNH).

Paratypes. **Zaire:** 16 ♀, 5 ♂ (MRAC).

REMARKS. This species is closely related to *quinclava* but is distinguished by the contrasting colour pattern of the head, pronotum and scutellum, and the shape of the pronotal plate (cf. Fig. 300).

***Trichoplasta equalis* sp. n.**

(Figs 291, 292, 296, 300)

DESCRIPTION. ♀. Antenna 13-segmented, clavate, segment 3 longer than 4, 4 longer than 5, 5 shorter than 6, 7–13 forming a distinct club (Fig. 296). Head, viewed frontally, with strong frontal ridges in part, subocular sulcus distinct, antennal sockets protruding, occipital carina pronounced. Pronotal plate with anterior and posterior fused laterally and medially with a small fovea either side of medial bridge, plate, viewed fronto-dorsally, with anterior rounded laterally (cf. Fig. 300), posterior transversely striated. Pronotum either side of pronotal plate pubescent, with transverse striations extending to mesopleura, mesopleural suture distinct; metapleura with crenulate ridges, anteroventral cavity pubescent, side of metapleura adjacent to nucha densely pubescent; mesoscutum smooth, polished, notaulices absent; scutellar foveae kidney-shaped, smooth, lateral bars of scutellum smooth, polished, septum broad; scutellar disc reticulate-punctate, apex beak-shaped (cf. Fig. 292), scutellar cup large, almost round, viewed laterally, elevated, apical half with a large fovea; propodeal carinae parallel, weakly pubescent medially, more densely pubescent on lateral margins; nucha ridged, pubescent; base of metapleura pubescent. Segment 1 of gaster not visible, obscured by a dense ring of pubescence at base of tergite 2, apical two-thirds of tergite 2 punctate, tergites 3 and 4 visible in lateral view, punctate; hypopygium not produced. Legs moderate to short, coxae swollen, elongate, sparsely pubescent. Wing surfaces pubescent, with apical fringe of hairs, radial cell of forewing open on wing margin, deep, not elongate, venation dark yellow, vein *M* (cubitus) extending almost to apex of wing. Colour: head and thorax blackish, gaster reddish yellow, antenna blackish brown, legs orange-yellow.

♂. Antenna 15-segmented, segment 3 shorter than 5 which is curved and swollen distally, flattened on outer side, viewed dorsally (cf. Fig. 291).

MATERIAL EXAMINED

Holotype ♀, **Zaire**: Tshamugussa (Beweza) Bambous, 10.viii.1934 (*G. F. de Witte*) (MRAC).
Paratypes. **Nigeria**: 1 ♂ (BMNH). **Zaire**: 36 ♀, 26 ♂ (MRAC).

REMARKS. Distinguished from the closely related *tanganyikensis* by the antennal and sculptural characters, see p. 320.

Trichoplasta extensus sp. n.

(Figs 338, 344, 348)

DESCRIPTION. ♀. Antenna 13-segmented, clavate, with a distinct 6-segmented club, segments 3–5 subequal, segments 8–13 with rhinaria forming a club, each segment clearly broader than apical segments. Head, viewed frontally, elongate, face smooth, polished, with long scattered hairs, subocular suture or sulcus distinct, antennal sockets weakly protruding. Occipital carina pronounced in dorsal view, obscured laterally by tufts of pubescence either side of pronotal plate. Posterior part of pronotal plate, viewed dorsally, straight, rounded laterally, anterior half diverging outwards, both parts joined laterally and medially to enclose two foveae (*cf.* Fig. 344). Mesoscutum smooth, polished, with a few hairs in place of notaulices; lateral bars of scutellum polished in dorsal view, scutellar foveae angular, polished; scutellar disc reticulate-rugose, converging apically to form a spine or beak-shaped apex (*cf.* Fig. 338). Pronotum and mesopleura smooth, polished; mesopleural suture distinct, metapleura with traces of ridges on lower edge, with sparse hair tufts. Propodeal carinae parallel, weakly pubescent medially, denser on outer margins of carinae, nucha ridged, pubescent. Segment 1 of gaster visible, crenulate, partially obscured by a ring of hairs at base of tergite 2, tergites 3 and 4 not visible in lateral view, gaster impunctate, hypopygium small, not projected. Legs long, slender, coxae with lateral fringe of hairs, femora, tibiae and tarsi pubescent. Wing surfaces pubescent, with apical fringe of hairs, radial cell of forewing closed on wing margin, short, broad (Fig. 348). Colour: head and thorax blackish brown, gaster chestnut-brown, legs orange-yellow, antenna yellowish orange basally, apical segments darkened.

♂ unknown.

MATERIAL EXAMINED

Holotype ♀, **Zaire**: Secteur Tshiaberimu, Mont Kitwa, 2840 m, 29.viii.–7.ix.1953 (*P. Vanschuytbroeck & V. Hendrickx*) (MRAC).

REMARKS. Separated from *narrata* by the pronotal plate character and the antennal segment ratios.

Trichoplasta filiformis sp. n.

(Figs 309, 310, 311, 339)

DESCRIPTION. ♀. Antenna 13-segmented, filiform, with indistinct 5-segmented club, segment 3 shorter than 4, 9–13 with rhinaria, forming a very weak club (Fig. 309). Head, viewed frontally, with frons raised, area above clypeus with long scattered hairs, antennal sockets protruding, subocular sulcus distinct. Occipital carina pronounced medially, fading laterally. Pronotal plate rounded on dorsal margin, angular on lateral margin, fovea on either side of medial bridge enclosed laterally, i.e. posterior and anterior parts joined laterally (*cf.* Fig. 324). Pronotum pubescent on either side of pronotal plate, not striated; mesopleural suture distinct, ventral margin of mesopleura pubescent, metapleura pubescent on apical margin; mesoscutum smooth, polished, notaulices absent, a few scattered hairs in their place; lateral bars of scutellum polished, scutellar fovea smooth, polished, scutellar disc reticulate-rugose, conical to beak-shaped viewed dorsally (Figs 310, 339), scutellar cup longer than broad. Propodeal carinae parallel, pubescent on either side, nucha ridged. Segment 1 of gaster obscured by a ring of pubescence at base of tergite 2, ring incomplete on dorsal surface, tergite 2 impunctate, smooth, polished, hypopygium protruding. Legs long, slender. Wing surfaces pubescent, with apical hair fringe, radial cell of forewing closed on wing margin, vein *M* (cubitus) not indicated. Colour: head, thorax and gaster orange-brown, antenna yellow basally, apical segments brownish black, legs yellow.

♂. Antenna 15-segmented, segment 4 the largest, curved, weakly swollen medially (Fig. 311).

MATERIAL EXAMINED

Holotype ♀, **South Africa**: E. Cape Province, Katberg, 19–22.ii.1924 (*R. E. Turner*) (BMNH).
Paratypes. **South Africa**: 1 ♀ (BMNH). **Zaire**: 13 ♀, 15 ♂ (MRAC).

REMARKS. Separated from closely related species by the colour pattern of the antenna and the ratio of the lengths of segments 3 and 4.

Trichoplasta gracilicornis (Kieffer)

(Figs 344, 346)

Coneucoela gracilicornis Kieffer, 1910a: 534. Holotype ♀, MADAGASCAR (ZM).
Odonteucoila gracilicornis (Kieffer) Weld, 1944: 63; Masner, 1960: 356 (redescribed).
Trichoplasta gracilicornis (Kieffer) Nordlander, 1982a: 272.

DESCRIPTION. ♀. Antenna 13-segmented filiform, club 6-segmented, segments 3 and 4 subequal in length, 5 shorter than 4, segments 6–11 each subequal to 3, subequal to each other, 12 and 13 each fractionally shorter than 6, equal to 3, club segments very slightly wider than preceding segments, not forming a distinct club (Fig. 346). Head, viewed frontally, smooth, polished, subocular suture distinct, antennal sockets pronounced, frons weakly raised, occipital carina distinct in dorsal view. Pronotal plate, viewed fronto-dorsally, weakly rounded on posterior margin, lateral margins straight, diverging, posterior and anterior parts of plate bridged laterally and medially to enclose two foveae or pits (cf. Fig. 344), anterior area striated. Mesoscutum smooth, polished, with a few scattered hairs, lateral lines (parapsidal furrows) very weakly indicated apically; lateral bars of scutellum polished dorsally, scutellar foveae shallow, lenticular, scutellar disc reticulate-rugose, conical at apex, not spine- or beak-shaped, scutellar cup large, almost oval, with a pale rim, inner margins of rim with a circle of small punctures, surface of cup weakly striated basally, base of cup with a small elliptical fovea. Pronotum, viewed laterally, smooth, shining; mesopleural suture distinct, metapleura polished. Propodeal carina almost parallel, bowed medially, lateral margins densely pubescent, weakly pubescent medially; nucha ridged, pubescent. Segment 1 of gaster partially obscured by a dense ring of hairs at base of tergite 2, visible part of tergite 1 crenulate. Segment 2 of gaster the largest in lateral view, segments 3 and 4 partially visible in lateral view, hypopygium produced. Wing surfaces pubescent, with apical hair fringe, radial cell of forewing closed on wing margin, vein *M* (cubitus) indicated, not pigmented. Colour: head, thorax and gaster chestnut-brown, legs yellowish orange, antenna yellowish basally, apical segments darker.

♂ unknown.

MATERIAL EXAMINED

South Africa: 1 ♀ (BMNH). Zaire: 4 ♀ (MRAC).

REMARKS. This species was intended as the basis for the erection of the genus *Coneucoela* Kieffer, 1910a, but was published subsequent to the description of *Coneucoela brasiliensis* Kieffer, 1909. Thus *brasiliensis* is the type-species of *Coneucoela*. Nordlander (1982a) transferred *gracilicornis* to *Trichoplasta*. I have not been able to see the holotype of *gracilicornis* but have used Masner's keys (1960) to *Odonteucoila*, the redescription of *gracilicornis*, and Kieffer's original description to identify the material listed above on which the figures are based.

Trichoplasta longispina (Masner)

(Figs 300, 335, 336)

Odonteucoila longispina Masner, 1960: 358. Holotype ♀, SOUTH AFRICA (NCISA).
Trichoplasta longispina (Masner) Nordlander, 1982a: 273.

DESCRIPTION. ♀. Antenna 13-segmented, with distinct 5-segmented club, segment 3 shorter than 4, 4–6 subequal in length, equal in width, 7–10 equal in length, 11 and 12 equal in length, each shorter than 6, 13 as long as 10 (Fig. 336). Head, viewed frontally, smooth, polished, with sparse hairs, frons raised, subocular sulcus distinct; pronotum polished laterally. Pronotal plate, viewed fronto-dorsally, straight on posterior margin, angled laterally, anterior and posterior parts of plate joined by a medial bridge, fovea on either side of bridge enclosed laterally (cf. Fig. 300). Mesoscutum smooth, polished, with a few scattered hairs; lateral bars of scutellum smooth, polished dorsally; scutellar foveae lenticular, scutellar disc with radiating reticulate-rugose, apex acute, spine-shaped, scutellar cup large, almost oval, surface raised medially, with a pale outer rim, base with a small elliptical fovea (Fig. 335). Mesopleural suture distinct, metapleura polished, ridged near juncture with hind coxa. Propodeal carinae weakly bowed, pubescent on outer margins. Segment 1 of gaster sulcate, partially obscured by a ring of hairs at base of tergite 2, complete on dorsal surface though weak, tergite 3 partially visible, hypopygium weakly protruding, gaster impunctate. Legs long, pubescent, mid and hind coxae elongate. Wing surfaces pubescent, with apical hair fringe, radial cell closed on wing margin, vein *M* (cubitus) not indicated. Colour: head brownish, thorax and gaster dark chestnut-red, legs yellowish orange, antenna yellowish orange basally, apical segments darker.

♂. Not seen, described by Masner (1960).

MATERIAL EXAMINED

Zaire: 1 ♀ (MRAC).

REMARKS. I have not seen determined material of this species, but the specimen from Zaire referred to above compares well with Masner's description and figures (1960). The species is included in the key purely on the basis of the description, but the figures are based on the specimen from Zaire.

Trichoplasta medlia sp. n.

(Figs 297, 300, 301, 331)

DESCRIPTION. ♀. Antenna 13-segmented, clavate, segment 3 longer than 4, 4 and 5 subequal, 6 longer than 5, 7–13 forming a weak club (Fig. 301). Head, viewed frontally, smooth, polished, elongate, subocular sulcus distinct, antennal sockets protruding, ocelli equidistant, occipital carina distinct. Pronotal plate with anterior and posterior parts fused laterally, medial bridge narrow, fovea either side of ridge elongate, posterior part of plate, viewed frontally, angular, anterior part projected, with weak transverse striations (Fig. 300); pronotum either side of pronotal plate with dense tufts of hair. Pronotum smooth, polished laterally; meopleural suture distinct, metapleura with a number of ridges; mesoscutum smooth, polished, without trace of notaulices; scutellar fovea large, polished; lateral bars of scutellum polished; scutellar disc coarsely reticulate-rugose, apex beak-shaped, viewed laterally it appears elevated; scutellar cup large, oval (Fig. 297), concave in apical region. Propodeal carinae almost parallel, medial area weakly pubescent, densely pubescent on outer margins of carinae, nucha ridged, base of metapleura with tufts of pubescence. Segment 1 of gaster not visible, obscured by a dense ring of hairs at base of tergite 2, complete on dorsal surface, tergite 2 densely punctate apically, segment 3 partially visible in lateral view, punctate, hypopygium not protruding. Legs short, stout, coxae swollen, elongate, with a fringe of hairs on side margins. Wing surfaces pubescent, with apical fringe of hairs, radial cell of forewing closed on margin, venation pallid, cell longer than broad (Fig. 299). Colour: head, thorax and gaster blackish to dark chestnut-red, antenna and legs reddish yellow.

♂. Antenna 15-segmented, filiform, segment 3 shorter than 4, 4 weakly swollen medially, very slightly longer than 5 (Fig. 331).

MATERIAL EXAMINED

Holotype ♀, **Zaire:** Uele, Monga, 18.iv.–8.v.1935 (*G. F. de Witte*) (MRAC).

Paratypes. **Nigeria:** 1 ♀, 1 ♂ (BMNH). **Zaire:** 8 ♀, 4 ♂ (MRAC).

REMARKS. This species is very closely related to *rufus* but is distinguished by the sculpture of the scutellar disc and the antennal segment ratios.

Trichoplasta narrata sp. n.

(Figs 304, 305, 324)

DESCRIPTION. ♀. Antenna 13-segmented, weakly clavate, with indistinct 6-segmented club, club segments with rhinaria, segment 3 shorter than 4, 4 longer than 5, 5 and 6 subequal, 7 shorter than 6, 8–13 subequal in length, each as long as 7, weakly swollen medially (Fig. 305), darker than basal segments. Head, viewed frontally, smooth, polished, antennal sockets protruding, subocular sulcus distinct, occipital carina well defined. Pronotal plate, viewed frontodorsally, with typically enclosed fovea either side of medial bridge between anterior and posterior parts of plate (*cf.* Fig. 324), posterior part of plate rounded dorsally, anterior part angled laterally. Pronotum either side of plate with tufts of pubescence. Mesoscutum smooth, polished; lateral bars of scutellum smooth, polished, scutellar fovea deep, clearly separated, polished; scutellar disc reticulate-rugose, apex beak-like, acutely pointed, cup large, with apical fovea. Mesopleural suture very fine, metapleura polished, weakly ridged, with a tuft of pubescence on anterior margin, nucha ridged, with long scattered pubescence. Segment 1 of gaster crenulate, partially obscured by a ring of pubescence at base of tergite 2 which is impunctate, remaining tergites not visible in lateral view, hypopygium pronounced. Legs slender, coxae with a hair fringe on outer margins. Wing surfaces pubescent, with long apical hair fringe, radial cell of forewing closed on wing margin, vein *M* (cubitus) indicated, not pigmented. Colour: head brownish, thorax and gaster orange-brown, antenna yellow basally, apical segments brownish.

♂. Antenna 15-segmented, segment 3 twisted medially, not swollen (Fig. 304).

MATERIAL EXAMINED

Holotype ♀, **Uganda:** Kawanda, x.1942 (*H. C. Taylor*) (BMNH).

Paratypes. **Uganda:** 1 ♀, 1 ♂, same data as holotype (BMNH). **Zaire:** 1 ♂ (MRAC).

REMARKS. This species is very closely related to *unicolora* but can be separated by the shape and form of the pronotal plate.

***Trichoplasta novema* sp. n.**

(Figs 324, 328, 332, 333)

DESCRIPTION. ♀. Antenna 13-segmented, clavate, segment 3 longer than 4, 4 shorter than 5, 5–13 forming a very distinct club (Fig. 328). Head, viewed frontally, smooth, polished, frons raised, with distinct lateral margins extending from raised antennal sockets, subocular sulcus (malar suture) distinct, with weak ridges on either side, occipital carina pronounced dorsally. Pronotal plate, viewed frontodorsally, weakly rounded, lateral margins more angular, anterior and posterior parts fused medially and laterally to enclose a fovea on either side of medial bridge, medial bridge narrow, fovea elongate, distinct, anterior part of plate weakly sculptured (Fig. 324). Pronotum pubescent either side of pronotal plate with a few canaliculations on lower lateral margins. Mesopleural suture distinct, metapleura ridged on lower margins (Fig. 334). Mesoscutum smooth, polished, notaulices absent; scutellar foveae kidney-shaped, lateral bars of scutellum with weak aberrant sculpture apically, scutellar disc with punctate-reticulate-rugose sculpture (Fig. 332), apex conical, scutellar cup large, almost circular, with a round fovea apically (Fig. 332). Propodeal carinae horseshoe-shaped, weakly pubescent medially, densely pubescent on lateral margins, nucha pubescent. Segment 1 of gaster obscured by a ring of dense pubescence at base of tergite 2 which is very weakly punctate apically, segment 3 partially visible in lateral view, hypopygium weakly produced. Legs slender, coxae narrow, sparsely pubescent. Wing surfaces pubescent, with apical hair fringe, radial cell of forewing elongate, open on wing margin, venation yellowish, vein *M* (cubitus) indicated, weakly pigmented basally (Fig. 333). Colour: head and thorax blackish, gaster chestnut-brown, antenna blackish brown, except basal segments lighter.

♂ unknown.

MATERIAL EXAMINED

Holotype ♀, **Uganda**: Butandiga, xii.1938 (*H. C. Taylor*) (BMNH).

Paratypes. **Uganda**: 1 ♀, same data as holotype (BMNH). **Zaire**: 2 ♀ (MRAC).

REMARKS. This species is very similar to *octonius* but has a 9-segmented antennal club, a weakly sculptured pronotum and the pronotal plate is angular (Fig. 324).

***Trichoplasta octonarius* sp. n.**

(Figs 354, 355, 356)

DESCRIPTION. ♀. Antenna 13-segmented, clavate, segment 3 longer than 4, 4 and 5 subequal, 6–13 forming a distinct club (Fig. 354). Head, viewed frontally, smooth, polished, frontal ridges prominent in proximity to antennal sockets which protrude, occipital carina pronounced, subocular suture distinct. Pronotal plate with anterior and posterior parts fused medially and laterally to enclose a fovea either side of medial bridge, medial bridge narrow, posterior part of plate rounded, anterior part angular on lower margins, anterior part smooth, polished. Pronotum viewed laterally pubescent either side of pronotal plate, with strong transverse striations extending to mesopleura. Mesopleural suture distinct, metapleura with five ridges. Mesoscutum smooth, polished, without trace of notaulices; scutellar foveae large, polished, with a hole in basal corner ending under lateral bars of scutellum which are polished; scutellar disc reticulate-rugose, apex conical, scutellar cup large, almost round, basal half with weak striations, apical half with a large fovea (Fig. 356). Propodeal carina broad, parallel, densely pubescent; nucha ridged; margin of metapleura pubescent. Segment 1 of gaster not visible, obscured by a ring of dense pubescence at base of tergite 2, apical two-thirds of tergite 2 punctate, tergites 3 and 4 visible laterally, hypopygium strongly produced. Legs short, coxae swollen, elongate, sparsely pubescent. Wing surfaces pubescent, with apical hair fringe, radial cell of forewing open on wing margin, longer than broad, venation pale, vein *M* (cubitus) visible, not pigmented (Fig. 355). Colour: head, thorax and gaster blackish, antenna orange-yellow basally, darker apically, legs orange-yellow.

♂ unknown.

MATERIAL EXAMINED

Holotype ♀, **Zaire**: Congo de Lemba, i.1913 (*R. Mayne*) (MRAC).

REMARKS. Closely related to *novema* but distinguished by the 8-segmented club and the laterally striate pronotum.

Trichoplasta quinclava sp. n.

(Figs 314, 342, 343, 344)

DESCRIPTION. ♀. Antenna 13-segmented, filiform, with weak 5-segmented club, segment 3 shorter than 4, 4–7 subequal in length, 8 and 9 subequal, each shorter than 7, 10–13 each slightly shorter than 9 (Fig. 343). Head, viewed frontally, smooth, polished, with long scattered hairs, cheeks converging, antennal sockets protruding, frons raised, subocular sulcus distinct, occipital carina distinct on dorsal margin, obscured by tufts of pubescence either side of pronotal plate which, viewed frontodorsally, is rounded posteriorly. Pronotal plate with anterior and posterior parts fused medially and laterally to enclose a fovea either side of medial bridge (Fig. 344). Pronotum smooth, polished laterally. Mesopleural suture distinct, metapleura strongly ridged basally, with tufts of hair either side of propodeum. Mesoscutum smooth, polished, notaulices absent, a few long hairs in their place; lateral bars of scutellum smooth, polished; scutellar foveae polished, kidney-shaped; scutellar disc reticulate-rugose, apex narrowing sharply to form a beak-shaped apex, scutellar cup elliptical (*cf.* Fig. 314). Propodeal carinae bowed medially, densely pubescent on outer margins; nucha ridged. Segment 1 of gaster crenulate, tergite 2 with a ring of hairs at its base, incomplete on dorsal surface, tergite 3 weakly protruding, hypopygium obscure, gaster impunctate. Legs short, stout, coxae elongate, with sparse hairs apically. Wings pubescent, with apical hair fringe, radial cell of forewing closed on wing margin, vein *M* (cubitus) indicated basally, not pigmented (Fig. 342). Colour: head and thorax blackish brown, legs orange-yellow, antenna yellow.

♂ unknown.

MATERIAL EXAMINED

Holotype ♀, **Zaire**: N. Lac Kivu, Rwanki, 15.ii.1952 (*J. V. Leroy*) (MRAC).Paratypes. **Zaire**: 3 ♀ (MRAC).

REMARKS. This species is separated from *contrast*a by the antennal coloration and the shape of the pronotal plate. The antennal club is not sharply contrasted to the basal flagellar segments but all club segments have rhinaria.

Trichoplasta rufus sp. n.

(Figs 298, 302, 303, 315, 317)

DESCRIPTION. ♀. Antenna 13-segmented, clavate, segment 3 longer than 4, 4 longer than 5, 6 longer than 5, 7–13 forming a club (Fig. 303). Head, viewed frontally, elongate, smooth, polished, subocular sulcus distinct, occipital carina distinct, ocelli weakly elevated, equidistant, antennal sockets protruding, mandibles tridentate, sparsely pubescent. Pronotal plate with anterior and posterior parts fused medially and laterally to enclose a fovea either side of medial bridge (Fig. 302). Pronotum either side of pronotal plate smooth, polished, with scattered hairs. Mesoscutum polished, without trace of notaulices; scutellar disc punctate-reticulate, apex beak-shaped (Fig. 298); scutellar cup almost oval, with a basal fovea, viewed laterally, elevated; scutellar foveae shallow, polished, separated by a weak septum; lateral bars of scutellum polished; propodeal carinae almost parallel, densely pubescent medially and laterally. Mesopleural carinae distinct, metapleura polished, with a few crenulations at juncture with coxa; nucha ridged, pubescent. Segment 1 of gaster not visible, obscured by a ring of dense pubescence at base of tergite 2, complete on dorsal surface, apex of tergite 2 with sparse scattered punctures, hypopygium weakly protruding. Legs stout, short, coxae elongate, pubescent, with a fringe of hairs. Wing surfaces densely pubescent, with apical hair fringe, radial cell of forewing open on wing margin, longer than broad (Fig. 315). Colour: head, thorax and gaster reddish brown, antenna and legs reddish yellow.

♂. Antenna 15-segmented, filiform, segment 3 shorter than 4, 4 flattened on outer margins (Fig. 317).

MATERIAL EXAMINED

Holotype ♀, **Madagascar**: Mandraka, ii.1944 (*A. Seyrig*) (MRAC).Paratype. **Madagascar**: 3 ♂, same data as holotype (MRAC). **Zaire**: 1 ♀ (MRAC).*Trichoplasta tanganyikensis* (Weld)

(Figs 292, 293, 324, 329)

Coneucoela tanganyikensis Weld, 1944: 63. Holotype ♀, TANZANIA (USNM) [examined].*Trichoplasta basilewskyi* Benoit, 1956: 538. Holotype ♀, RWANDA (MRAC) [examined].

[Synonymy by Nordlander, 1982a: 272.]

Trichoplasta tanganyikensis (Weld) Nordlander, 1982a: 272.

DESCRIPTION. ♀. Antenna 13-segmented, segment 3 subequal to 4+5, 6 longer than 4 or 5, 7–13 subequal in length, all distinctly wider than preceding flagellar segments and forming a sharply defined club (Fig. 329). Head, viewed frontally, smooth, shining, rounded, frons raised, eyes same distance apart as height of an eye, malar space with a carina and weak striations on lower side, vertex smooth, shining. Pronotum either side of pronotal plate with tufts of pubescence. Pronotal plate produced, anterior and posterior parts fused laterally, medial bridge between both parts narrow (*cf.* Fig. 324), fovea either side of bridge wider than long. Mesopleural suture distinct, metapleura ridged. Mesoscutum smooth, polished, notaulices represented by a row of hairs; scutellar foveae large, smooth, shining; scutellar disc reticulate-rugose, apex conical, extending out over propodeum, scutellar cup large, a little longer than wide, apical quarter with a large fovea, lateral margins of cup with a line of small foveae or pits (Fig. 292); lateral bars of scutellum smooth and polished on dorsal surface; propodeal carinae bowed medially, pubescent on outer margins of carinae, less so medially. Segment 1 of gaster rugulose though obscured by a ring of dense pubescence at base of tergite 2, complete on dorsal surface, apical half of tergite 2 and visible parts of tergites 3 and 4 strongly punctate (Fig. 293), hypopygium strongly protruding. Wing surfaces densely pubescent, with apical fringe of hairs, radial cell of forewing open on wing margin, vein *M* (cubitus) weakly indicated in part, apex of wing rounded. Legs short, stout, coxae swollen medially, tibiae and tarsi pubescent. Colour: antenna yellowish black, head and thorax black, gaster chestnut reddish brown, legs reddish brown.

♂. Antenna 15-segmented, segment 3 shorter than 4, outer margin flattened, segment 4 longer than following segments, swollen distally, flattened medially.

MATERIAL EXAMINED

Holotype ♀ (*tanganyikensis*), **Tanganyika**: Mutresa, 21.ix.1935 (*F. Bianchi*) (USNM, cat.No. 56814). Holotype ♀ (*basilewskyi*), **Rwanda**: Contrefort est du Muhavara, 2100 m, 28.i.1953 (*P. Basilewsky*) (MRAC).

Zaire: 1 ♀, Mt Sesero, near Bitashrmva (Bombous), 2000 m, 1–2.viii.1934 (*G. F. de Witte*) (MRAC). **Cameroun**: 1 ♀ (BMNH).

REMARKS. *Trichoplasta tanganyikensis* (Weld) was originally assigned to *Coneucoela*. Benoit (1956) established the genus *Trichoplasta* and designated *basilewskyi* as type-species. Nordlander (1982a) synonymised both species. Masner (1960) and Nordlander (1978a, 1980) had previously regarded *Odonteucoila* a genus in which Masner had described a number of species now recognised as belonging in *Trichoplasta* as being closely related to *Rhoptromeris*. The type-species of *Odonteucoila*, however, belongs to those groups of genera with the lateral cavities of the pronotal plate open.

Trichoplasta testacea sp. n.

(Figs 347, 349, 350, 351)

DESCRIPTION. ♀. Antenna 13-segmented, clavate, with a 6-segmented club, segment 3 shorter than 4, 4 longer than 5, 5 shorter than 6, first club segment slightly less broad than others (Fig. 349), all with rhinaria. Head, viewed frontally, smooth, polished, with a line of hairs extending from base of clypeus to antennal sockets, subocular sulcus present, occipital carina distinct viewed dorsally. Pronotal plate, viewed frontodorsally, with two foveae, one each side of medial bridge between anterior and posterior parts of plate, fovea closed laterally, sides of plate angular (Fig. 351), pronotum either side of plate with dense tufts of pubescence. Mesoscutum smooth, polished, notaulices very weakly indicated anteriorly by a few scattered hairs in their place; lateral bars of scutellum very weakly indicated; scutellar foveae kidney-shaped, smooth, polished; scutellar disc shining, weakly areolate, apex sharply tapered, scutellar cup long, narrow, apex with a small declined fovea (Fig. 350). Pronotum smooth on lateral margins; mesopleural suture distinct, metapleura smooth, pubescent on anterior margins; nucha ridged. Segment 1 of gaster obscured by a ring of hairs at base of tergite 2, incomplete on dorsal surface, apex of tergite 2 impunctate, tergite 3 partially visible, hypopygium pronounced. Legs long, slender, coxae and tibiae weakly pubescent. Wing surfaces pubescent, apical margins with a hair fringe, radial cell of forewing closed on wing margin (Fig. 347), vein *M* (cubitus) not indicated. Colour: head, thorax, gaster and legs orange-yellow.

♂ unknown.

MATERIAL EXAMINED

Holotype ♀, **Nigeria**: Ibadan (*B. R. Critchley*).

REMARKS. This species is completely orange-yellow and differs from others by the scutellar cup which has a declined fovea apically (Fig. 350).

Trichoplasta unicolora sp. n.

(Figs 319, 320, 351, 352)

DESCRIPTION. ♀. Antenna 13-segmented, weakly clavate, with a 6-segmented club, segment 3 shorter than 4, 5–10 subequal in length, segments 8–13 broader medially than segments 3–7 (Fig. 319). Head, viewed frontally, smooth, polished, with long scattered hairs on frons and close to clypeal area, sutures weakly present below antenna, antennal sockets not prominent, anterior tentorial pits distinct; occipital carina distinct dorsally, obscured laterally by tufts of pubescence on either side of pronotal plate. Pronotal plate appearing rectangular viewed frontodorsally, anterior and posterior parts bridged medially and laterally to enclose two pits, one on either side of medial bridge, medial bridge broad (cf. Fig. 351). Mesoscutum smooth, polished, with a few long hairs in place of notaulices; scutellar foveae shallow, weakly separated, polished; scutellar disc reticulate-rugose, tapered to form a blunt point apically; lateral bars of scutellum polished dorsally; scutellar cup oval, with a pale rim, centre raised, polished, with small pits or foveae around rim (cf. Fig. 320). Lateral margins of pronotum, mesopleura and metapleura polished. Mesopleural suture distinct, metapleura with weak ridges, lower edges with tufts of hairs. Propodeal carinae parallel, weakly pubescent; nucha ridged, pubescent. Segment 1 of gaster crenulate, partially obscured by a ring of pubescence at base of tergite 2, incomplete on dorsal surface, gaster impunctate, hypopygium not pronounced. Legs long, slender, pubescent, coxae elongate. Wings narrow, surfaces pubescent, with apical hair fringe, radial cell of forewing closed on wing margin, vein *M* (cubitus) not indicated, venation weakly pigmented. Colour: head light brown, thorax and gaster orange-brown, legs yellow, antenna pale yellow.

♂ antenna 15-segmented, segment 4 curved medially, swollen basally (Fig. 352).

MATERIAL EXAMINED

Holotype ♀, **Zaire**: Rutshuru, xii.1937 (*J. Ghesquière*) (MRAC).

Paratypes. **Zaire**: 9 ♀, 6 ♂ (MRAC).

REMARKS. Closely related to *narrata* but separated by the form of the pronotal plate and the completely pale antenna.

Trichoplasta zeus sp. n.

(Figs 344, 356, 358)

DESCRIPTION. ♀. Antenna 13-segmented, very weakly clavate, segment 3 shorter than 4, 5–13 each shorter than 4, 4–6 subequal in length and width, 7–13 with rhinaria, weakly swollen medially, subequal in length, forming a 6-segmented club (Fig. 358). Head, viewed frontally, smooth, polished, with scattered hairs extending from antennal region to clypeus, anterior tentorial pits distinct, subocular sulcus fine but distinct, antennal sockets weakly protruding, occipital carinae, viewed dorsally, not conspicuous, head, viewed dorsally, with hind margin almost straight, ocelli equidistant, viewed frontally, eyes as far apart measured medially as height of an eye. Pronotal plate projected forward, anterior and posterior parts fused laterally and medially very weakly, to enclose a fovea on either side of medial bridge (cf. Fig. 344); lateral margins of pronotum with tufts of pubescence on either side of lower margins of pronotal plate, surface polished. Mesoscutum smooth, polished, notaulices absent; lateral bars of scutellum smooth, polished; scutellar disc reticulate-rugose, apex conical, beak-shaped in lateral view; scutellar cup large, with apical fovea (cf. Fig. 356). Mesopleura smooth, polished, suture distinct, metapleura with long hairs on anterior margin, anteroventral cavity open basally, a few hairs present. Propodeal carinae parallel, converging at juncture with nucha, densely pubescent on lateral margins, with sparse hairs medially. Segment 1 of gaster ridged, obscured by a ring of dense pubescence at base of tergite 2, tergites 3 and 4 partially visible in lateral view, gaster impunctate, hypopygium weakly protruding. Legs long, slender, pubescent. Wings narrow, surface pubescent, apical margins with a hair fringe, radial cell of forewing closed on wing margin, venation pale yellow, vein *M* (cubitus) not indicated. Colour: head and thorax brownish black, gaster brownish yellow, legs orange-yellow, antenna yellow basally, apical segments darkish.

♂ unknown.

MATERIAL EXAMINED

Holotype ♀, **Cameroun**: Mt Cameroon, Mann's Quelle, 7400 ft (2250 m), 30.i.1932 (*M. Steele*) (BMNH).

Paratypes. **Cameroun**: 3 ♀ (BMNH), same data as holotype (one damaged).

REMARKS. Distinguished from the closely related species *gracilicornis* by the antennal segment ratios.

Acknowledgements

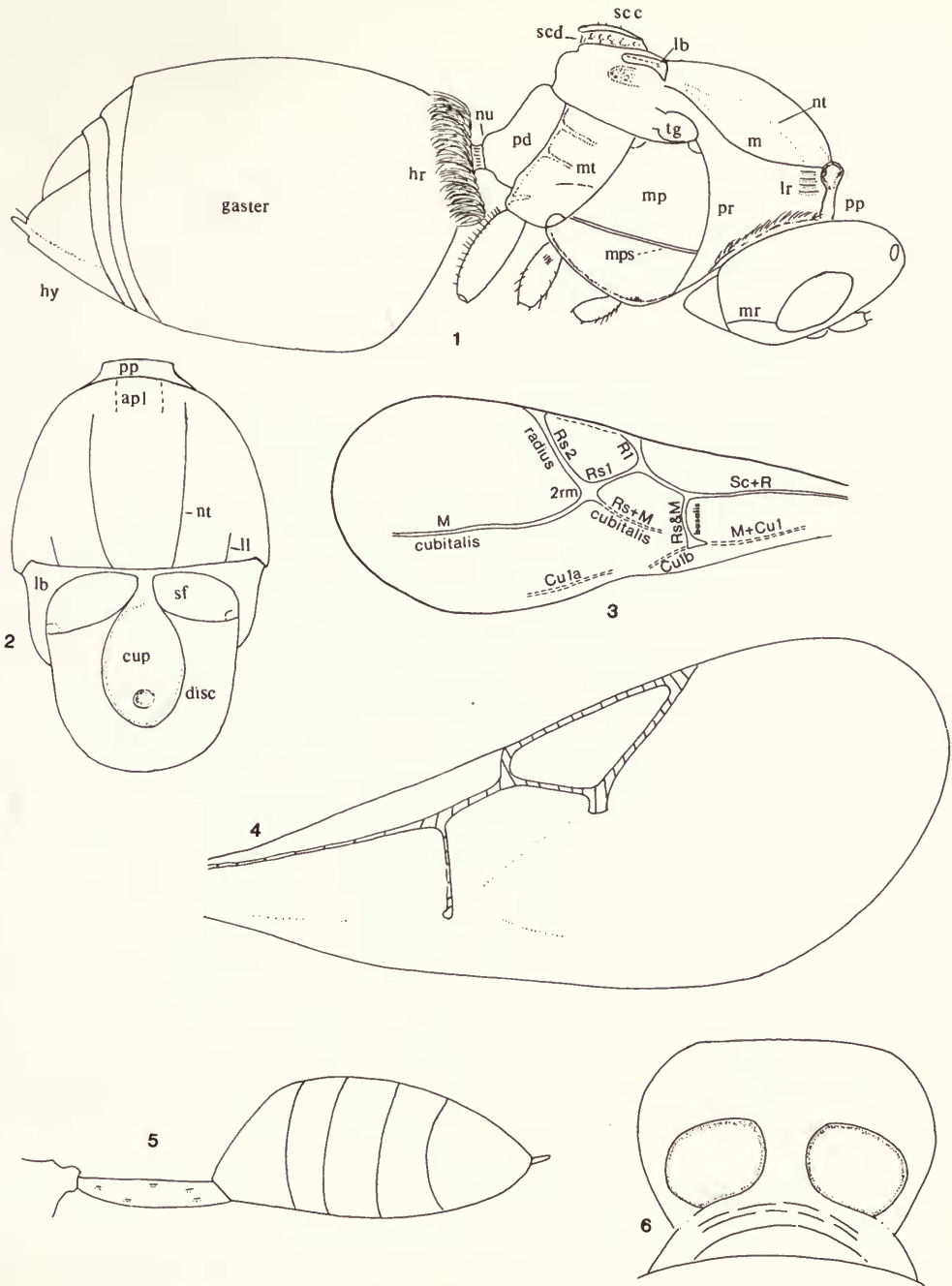
I wish to thank my colleagues in the Hymenoptera Section for their advice, particularly Mr T. Huddleston who critically examined the introduction. My thanks are extended to my sister-in-law Marina Ellwood for typing the manuscript.

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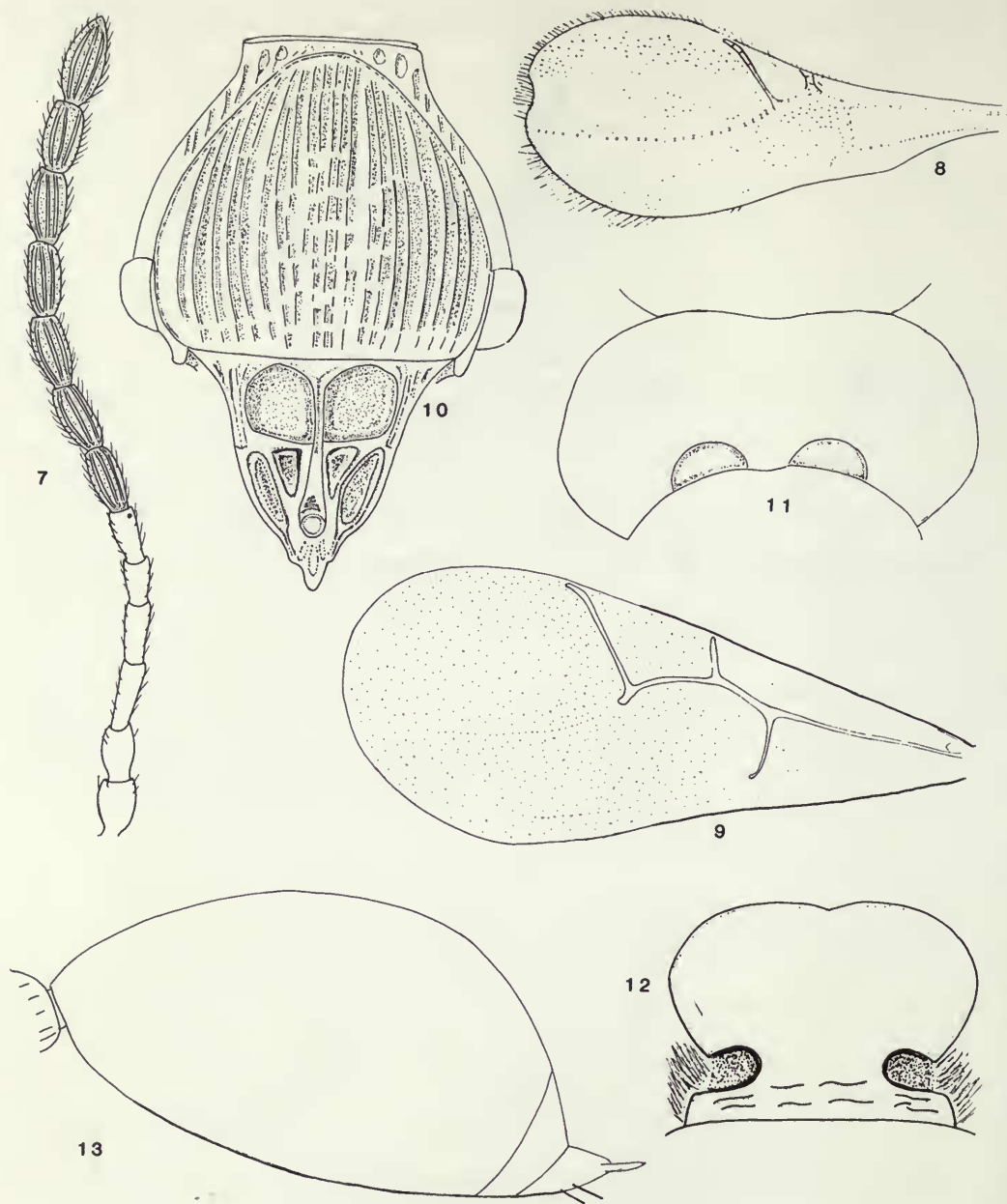
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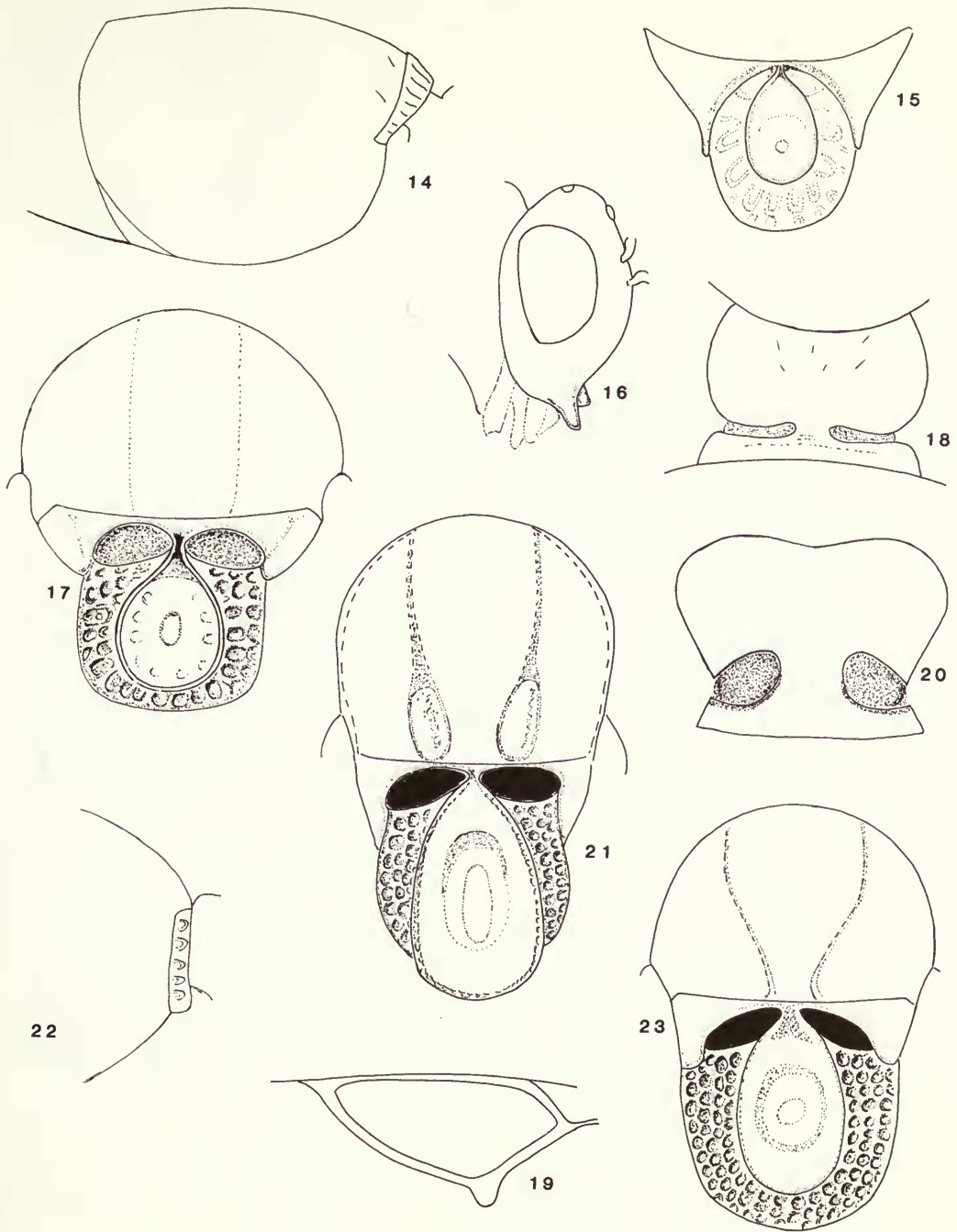
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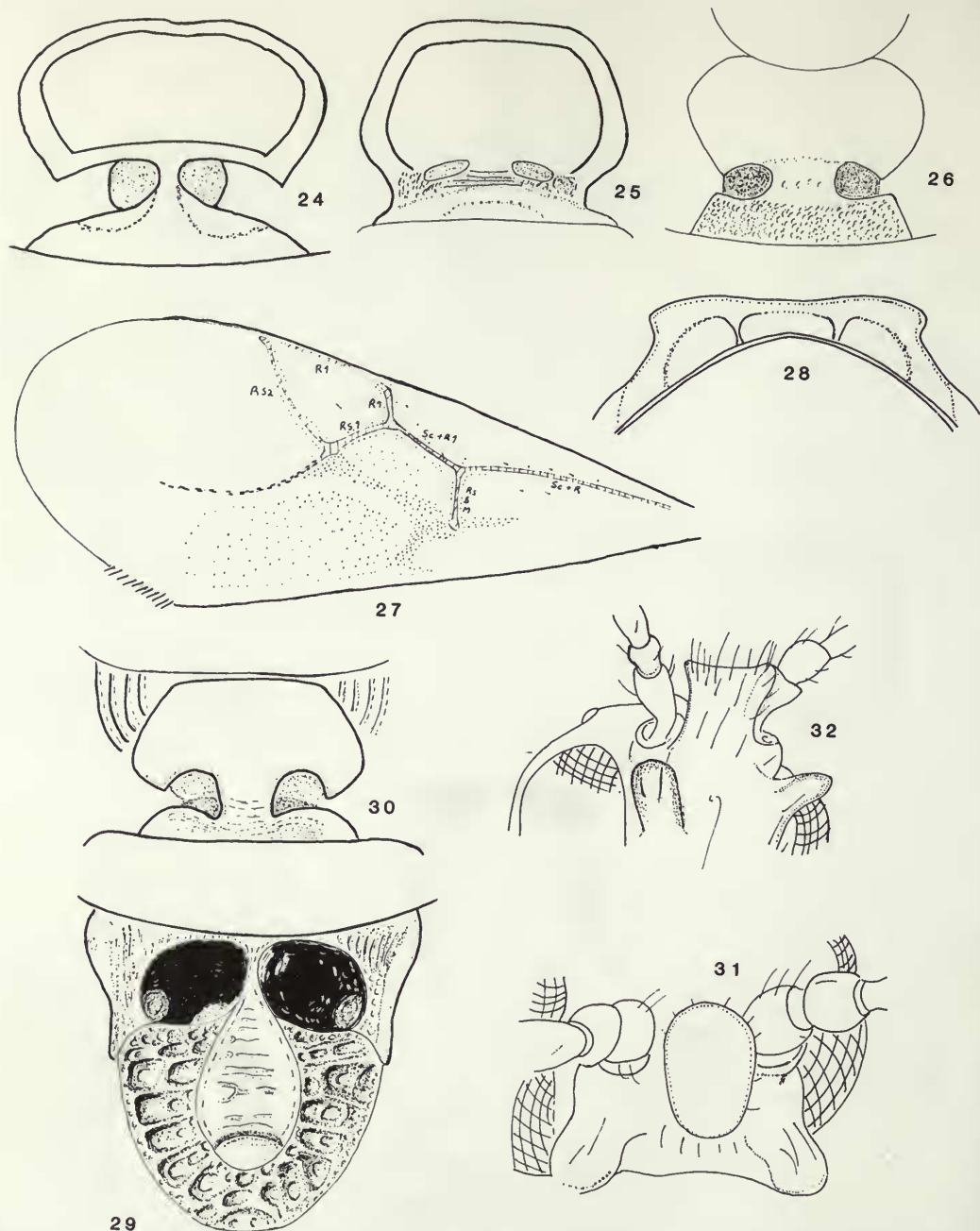
Figs 1–6 1, thorax and gaster, lateral view of Eucoilidae. 2, thorax, dorsal view, of Eucoilidae. 3, forewing of Eucoilidae. 4, forewing of Anacharitinae. 5, lateral view of gaster of Anacharitinae. 6, pronotal plate of *Rhoptromeris* sp.



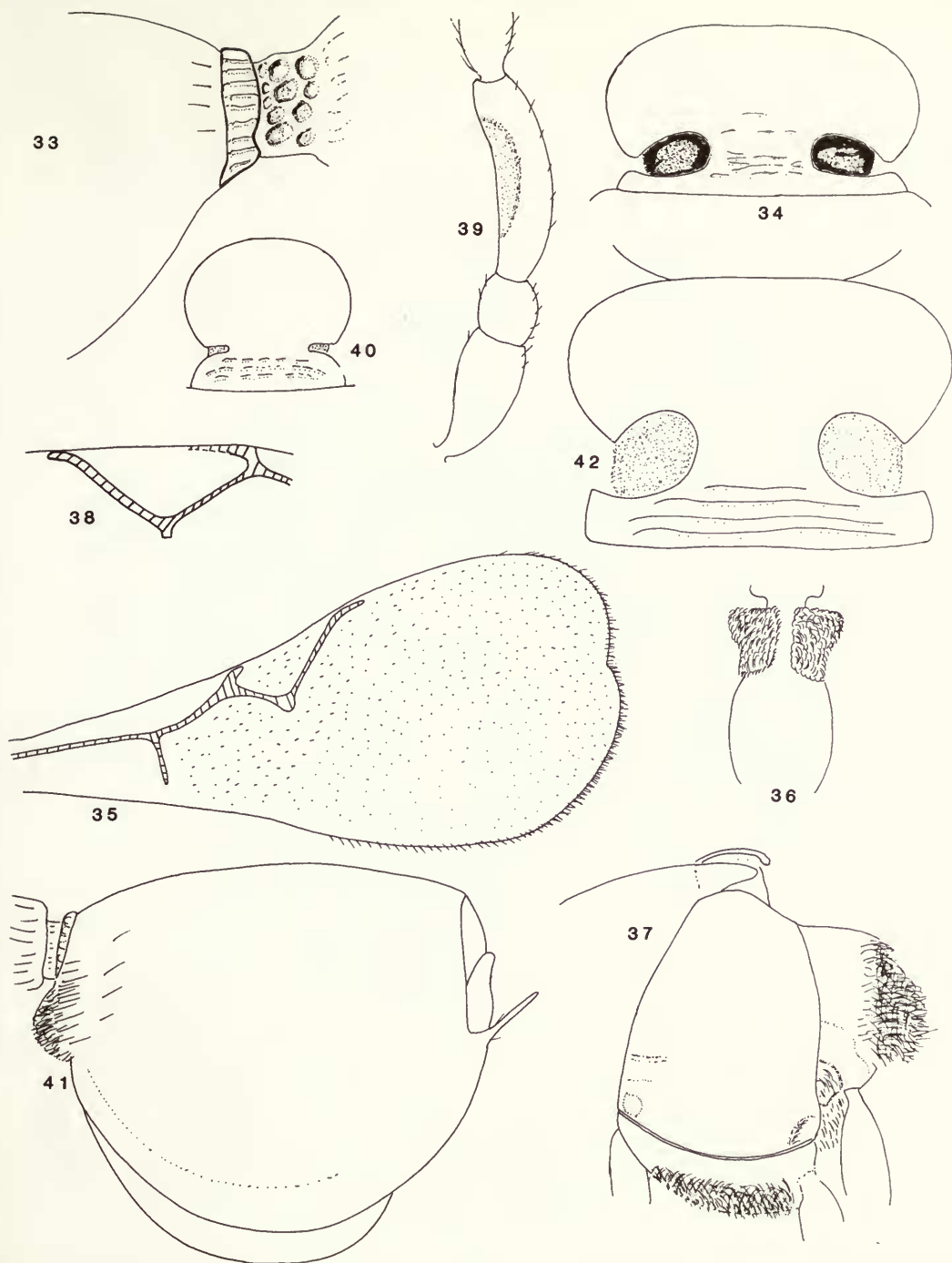
Figs 7-13 7, ♀ antenna of *Rhoptromeris heptoma* (Hartig). 8, forewing of *Kleidotoma psiloides* Westwood. 9, 10, *Afrodontaspis* sp.; (9) forewing; (10) mesonotum. 11, *Nordlanderia* sp., pronotal plate. 12, *Trybliographa* sp., pronotal plate. 13, *Nordlanderia* sp., gaster.



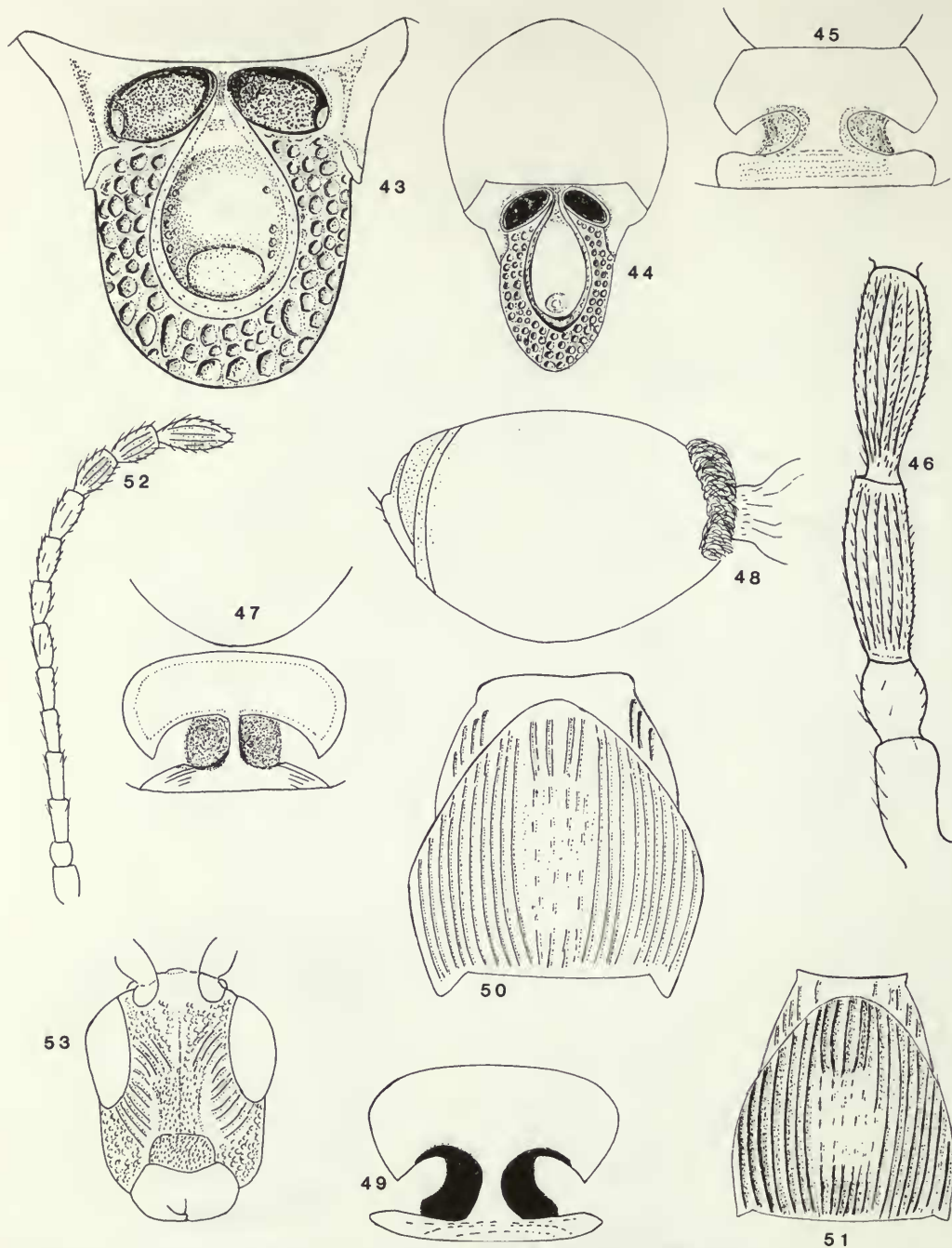
Figs 14–23 14, *Eucoilidea* sp., gaster. 15, *Nordlanderia* sp., scutellar disc. 16, *Nordlanderia* sp., lateral view of head. 17, *Disorygma* sp., mesonotum. 18, *Diglyphosema* sp., pronotal plate. 19, *Ealata* sp., radial cell. 20, *Ealata clava* sp. n., pronotal plate. 21, *Diglyphosema conjungens* Kieffer, mesonotum. 22, *Diglyphosema* sp., 1st tergite of gaster. 23, *Eucoilidea* sp., scutellum.



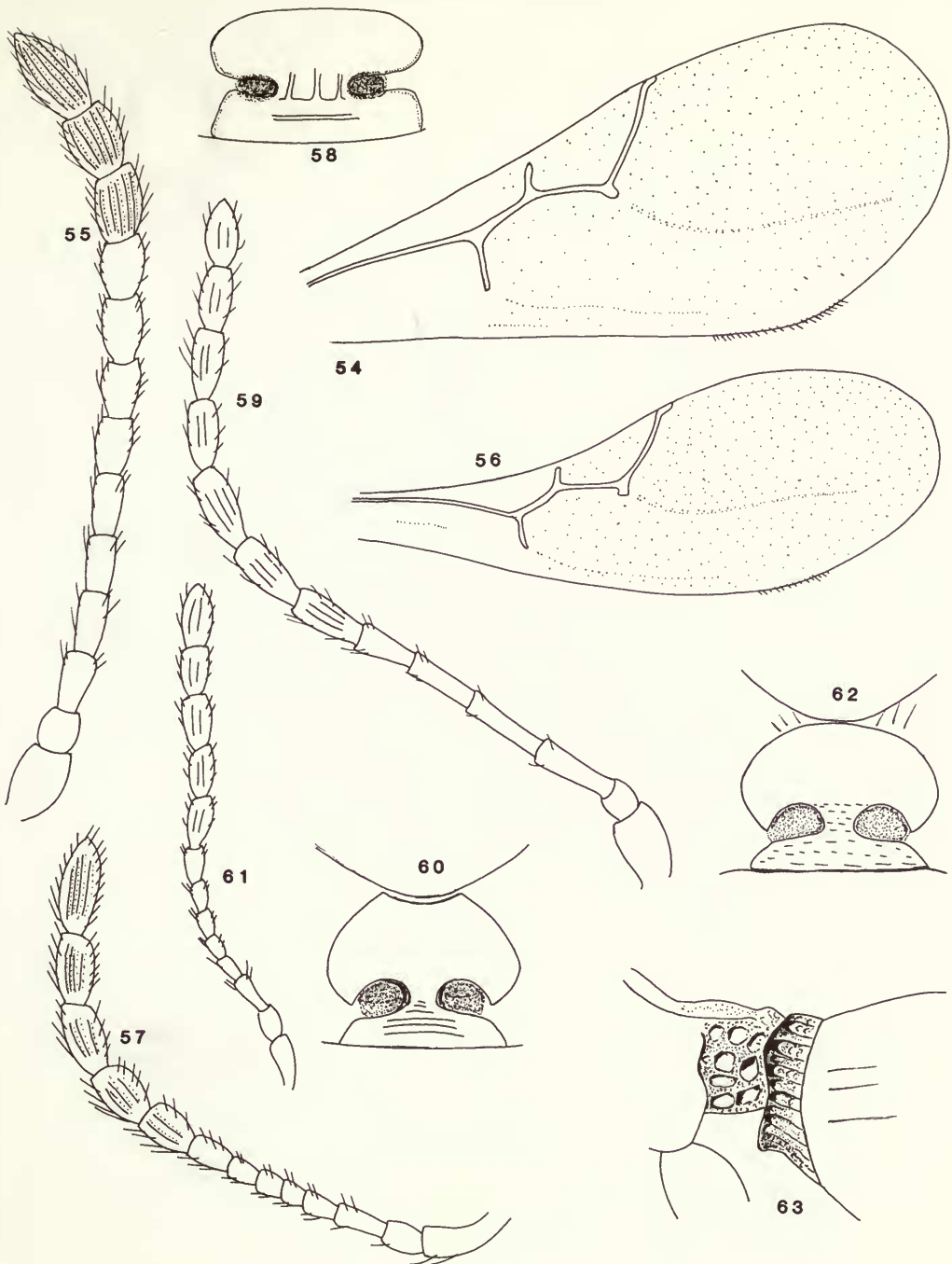
Figs 24–32 24–26, pronotal plate of (24) *Afrodontaspis striatissima* Benoit; (25), *Trichoplasta medlia* sp. n.; (26) *Odonteucoila* sp. 27, *Eucoila* sp., forewing. 28, *Eucoila* sp., dorsal view of pronotal plate. 29, 30, *Bothrochacis* sp.; (29) scutellum; (30) pronotal plate. 31, *Stentoriceps tubicen* Quinlan; (31) head, dorsal view; (32) head, lateral view.



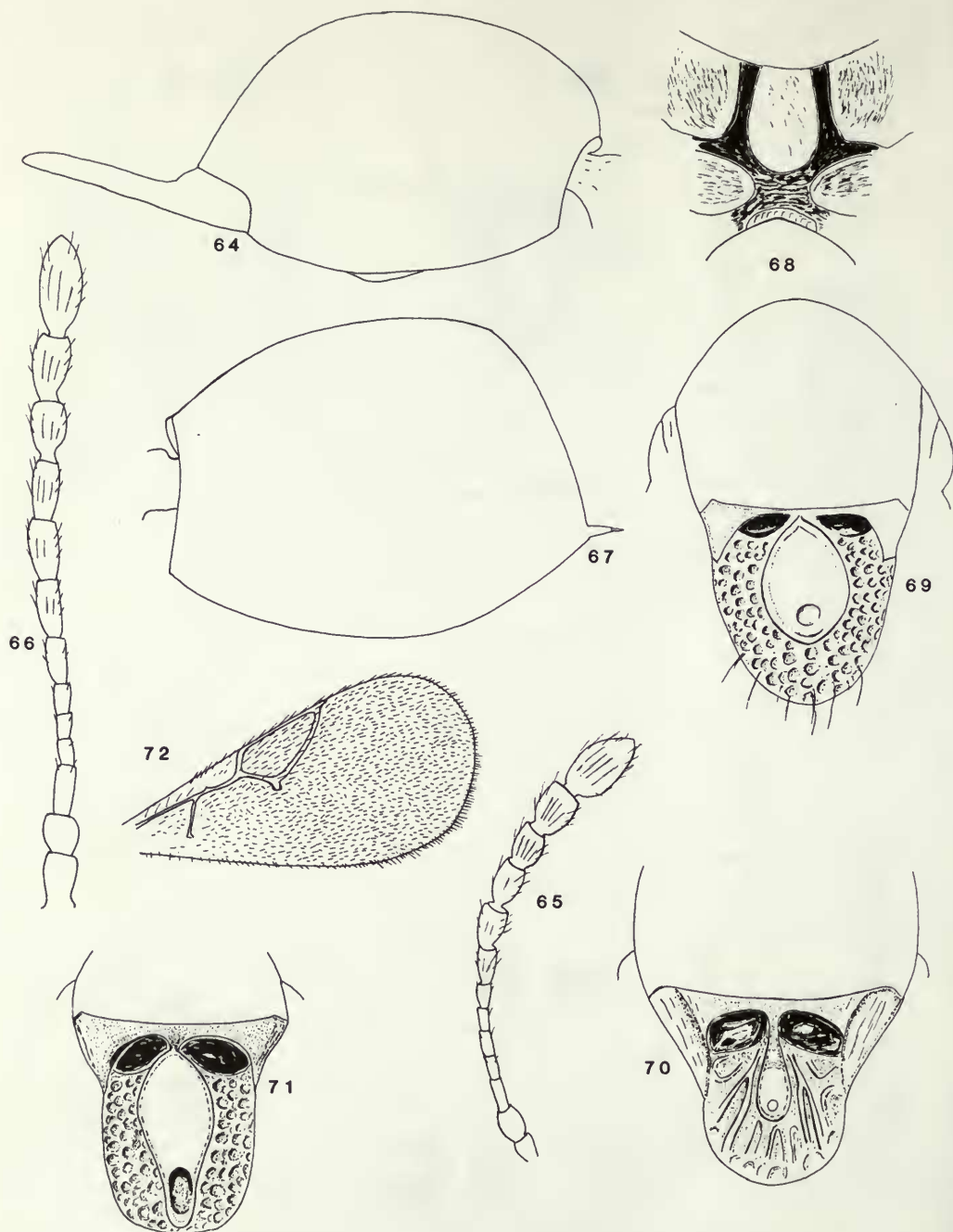
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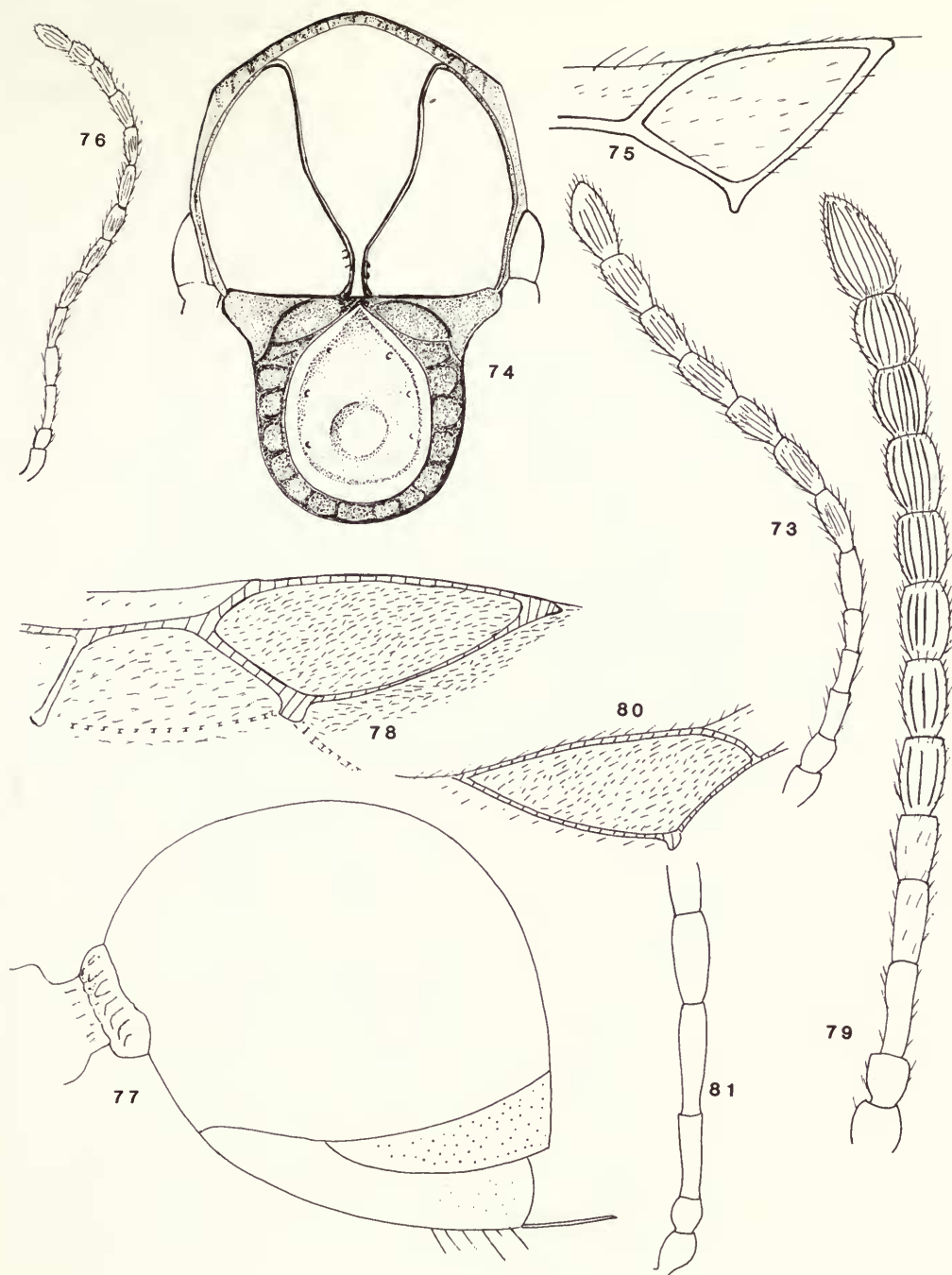
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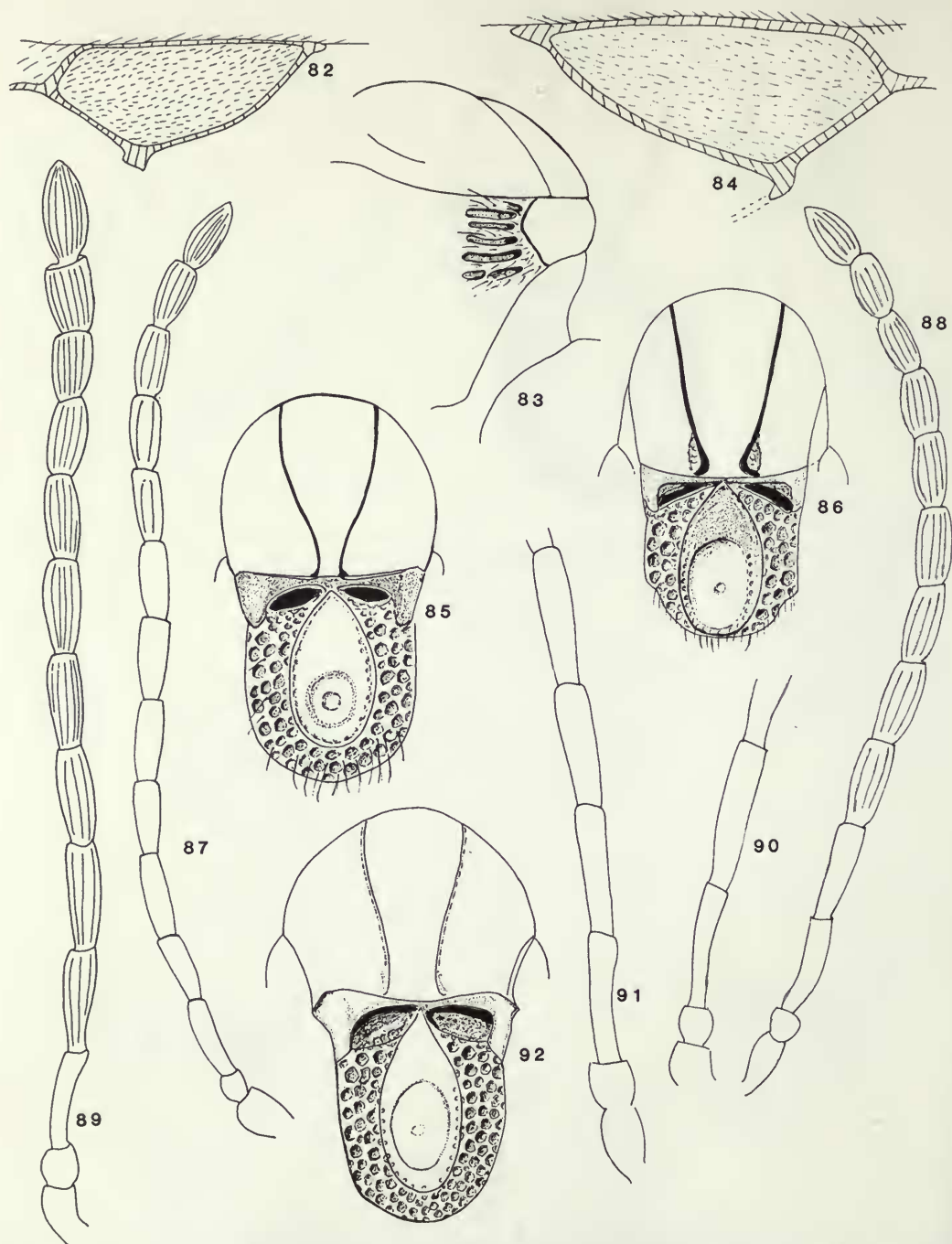
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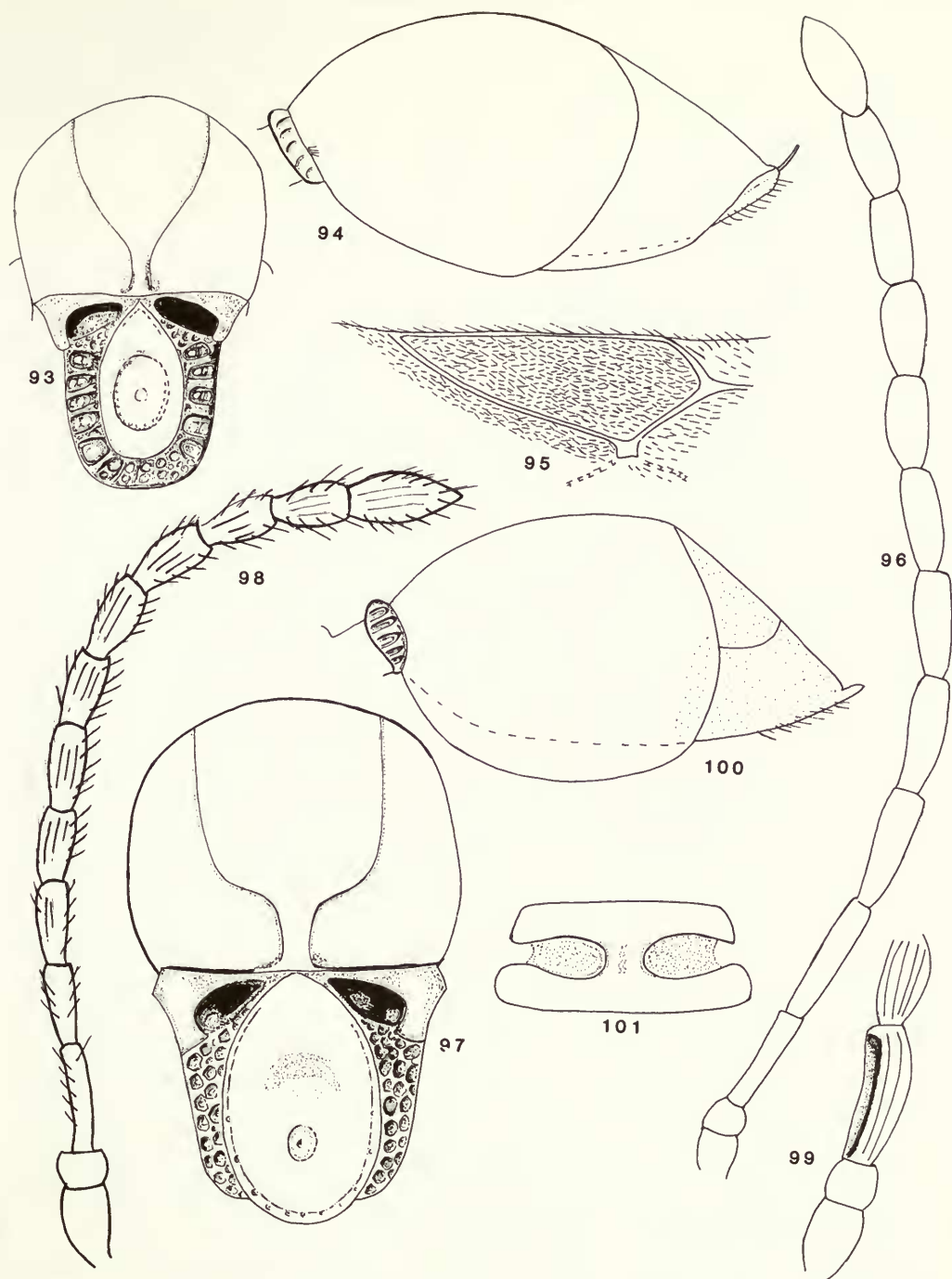
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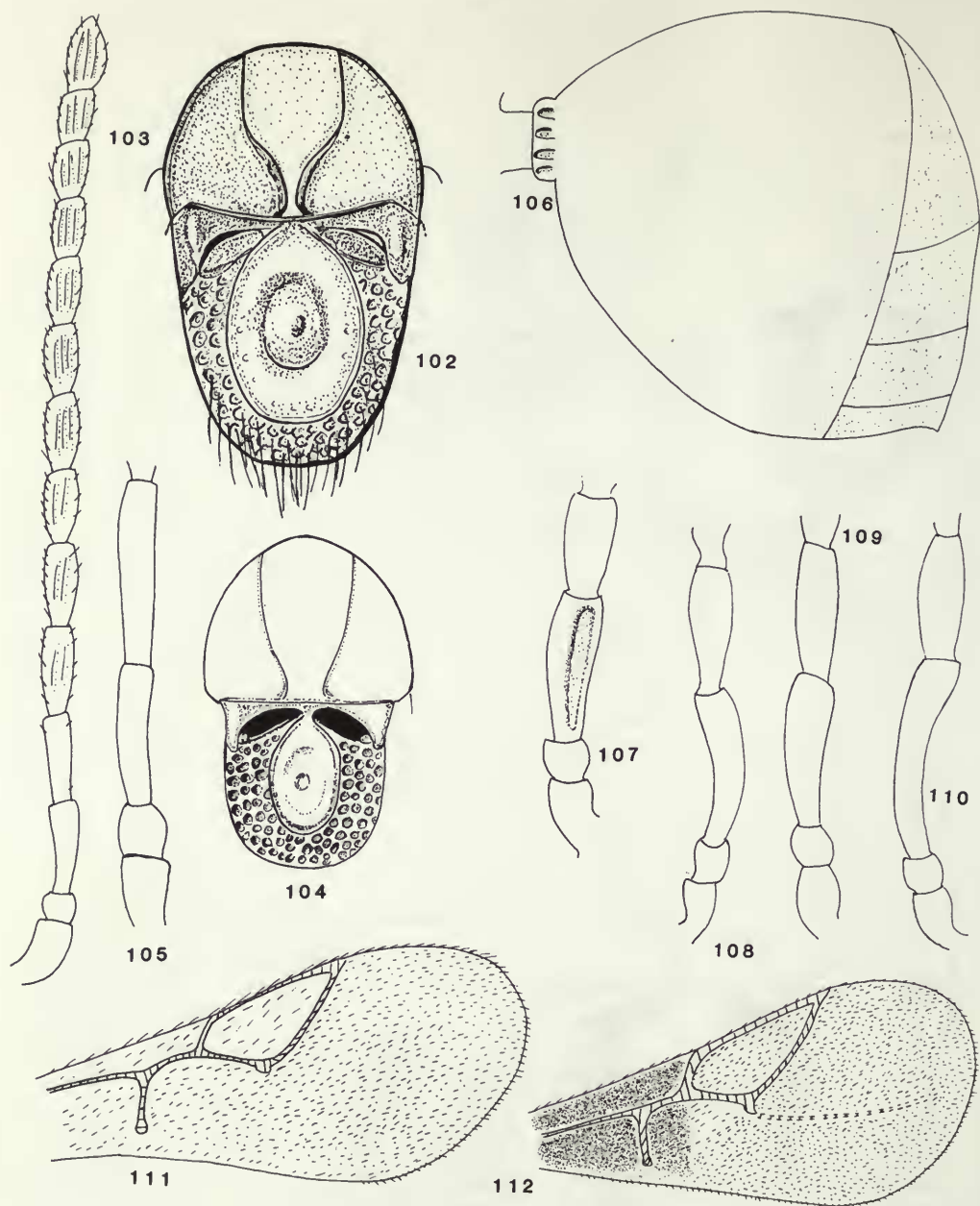
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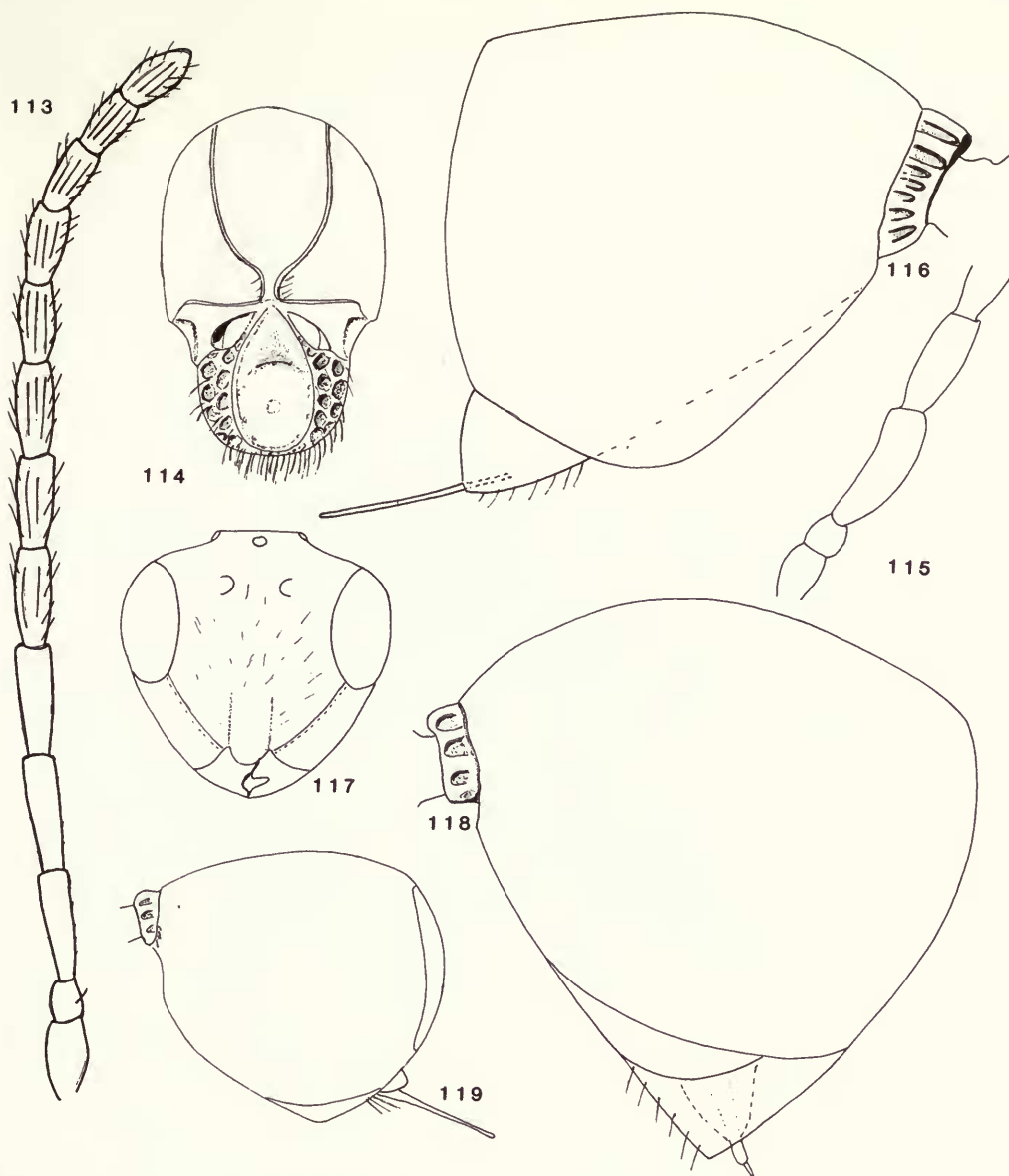
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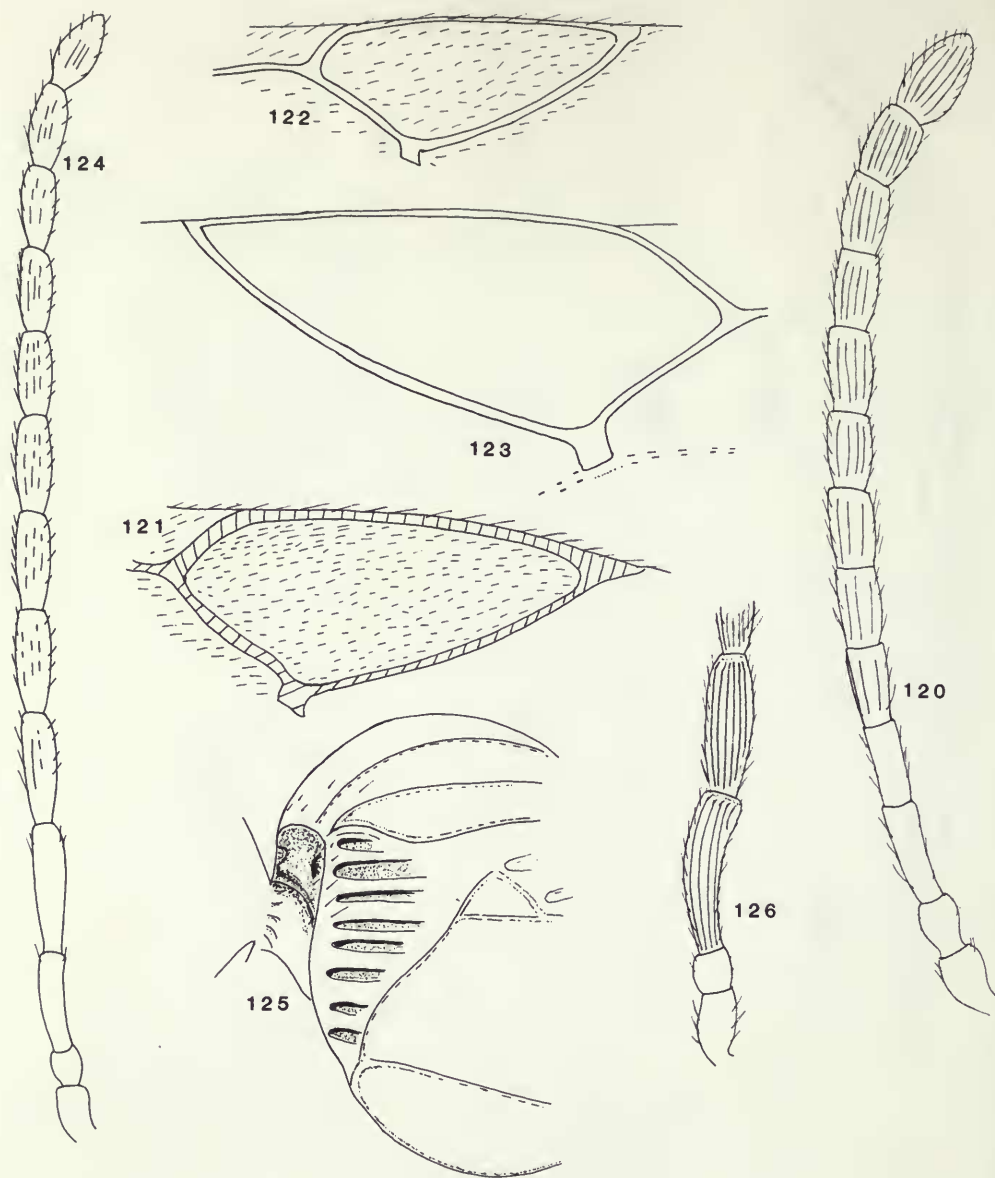
Figs 93–101 93, mesonotum of *Eucoilidea pallida* sp. n. 94, gaster of *E. compressa* sp. n. 95, radial cell of *E. perangusta* sp. n. 96, ♀ antenna of *E. perangusta* sp. n. 97, mesonotum of *E. bucca* sp. n. 98, ♀ antenna of *E. urundiensis* Benoit. 99, ♂ basal antennal segments of *E. urundiensis* Benoit. 100, 101, *E. urundiensis* Benoit; (100) gaster; (101) pronotal plate.



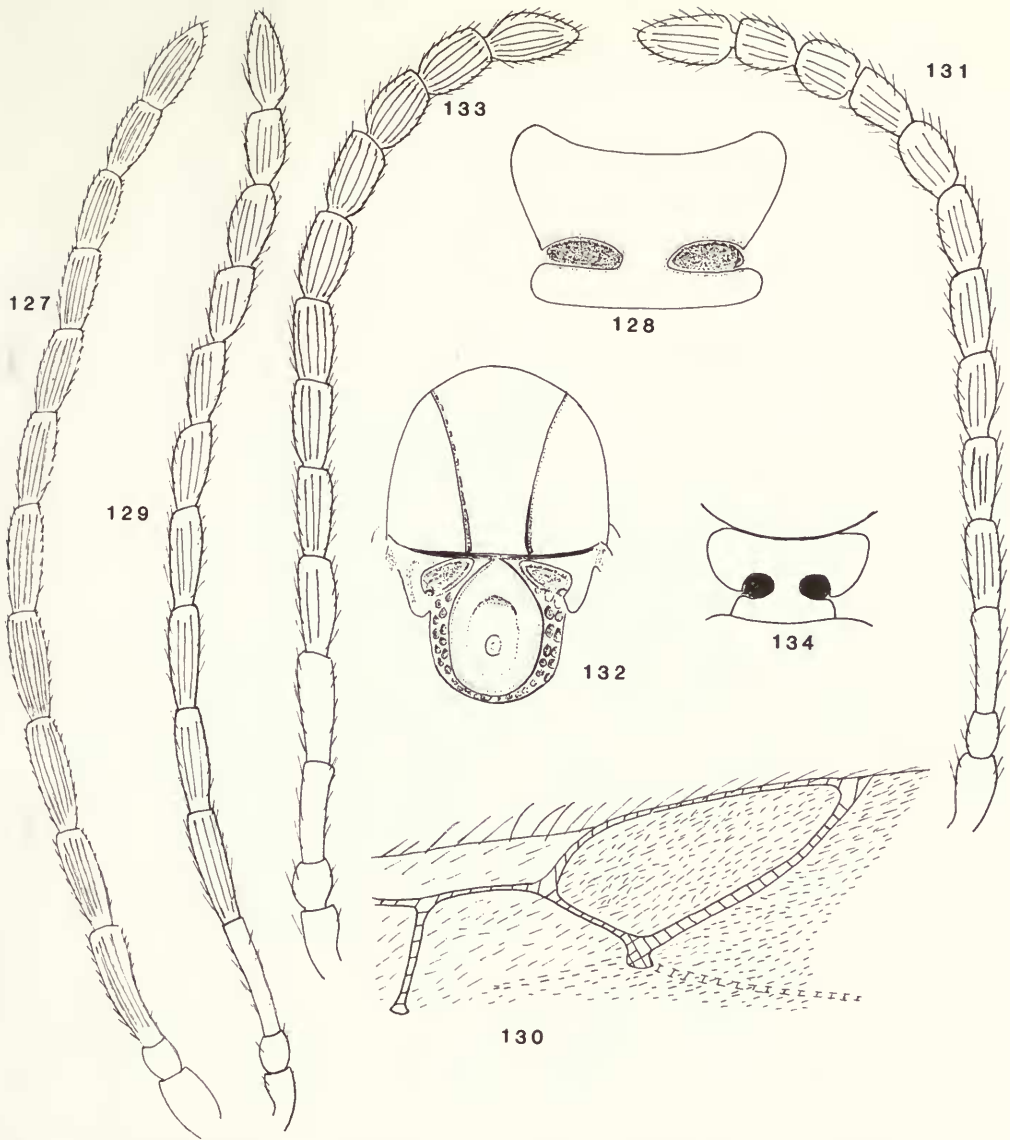
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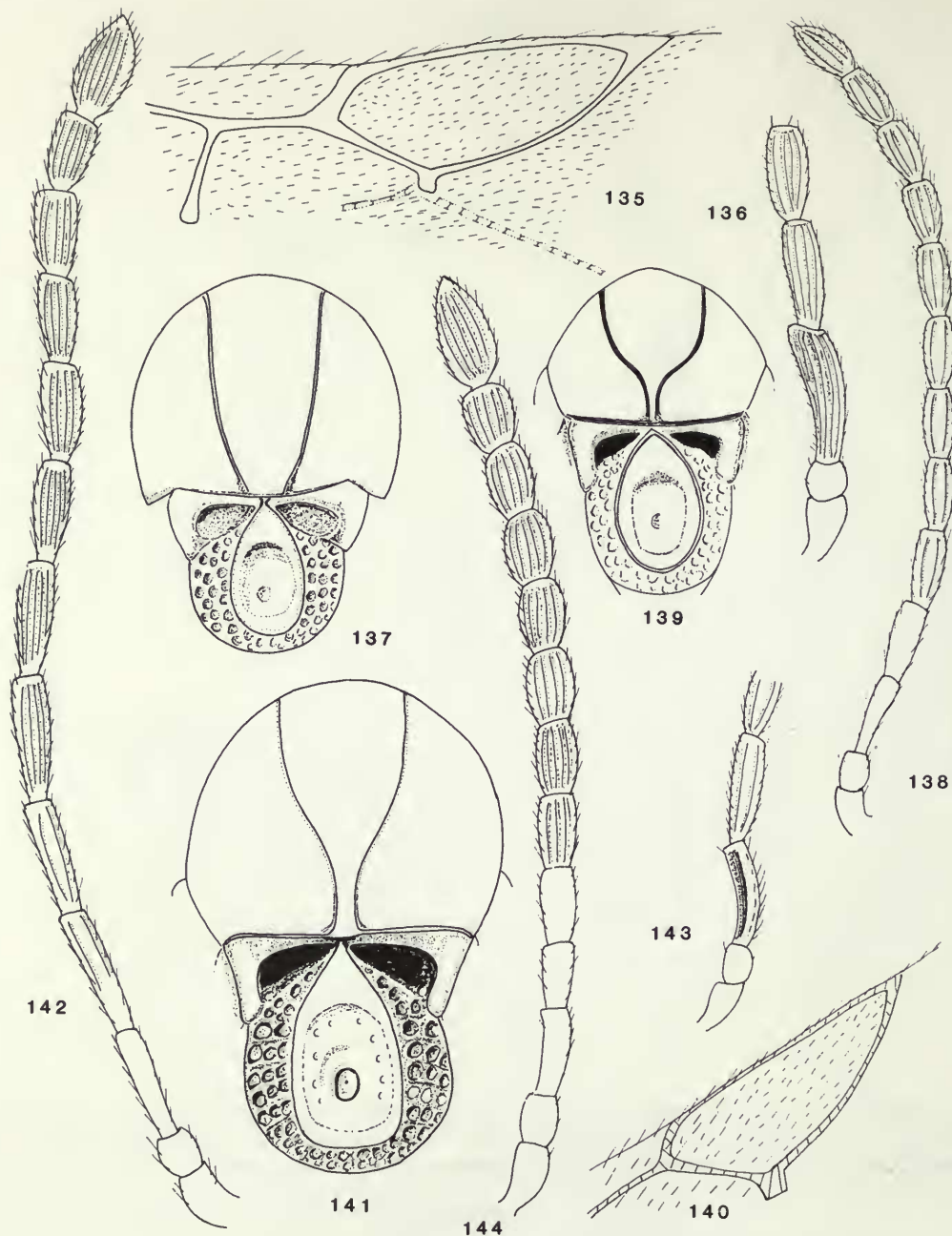
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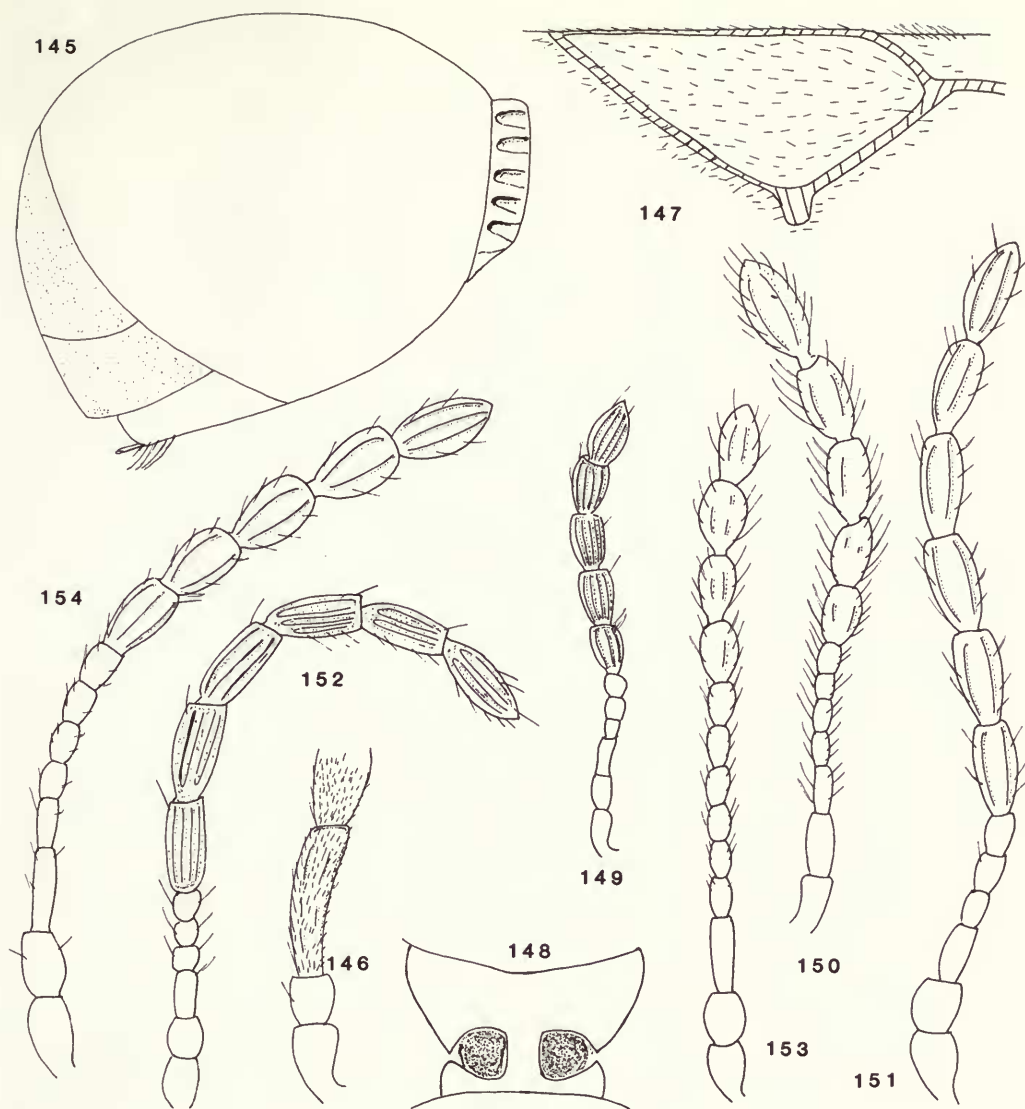
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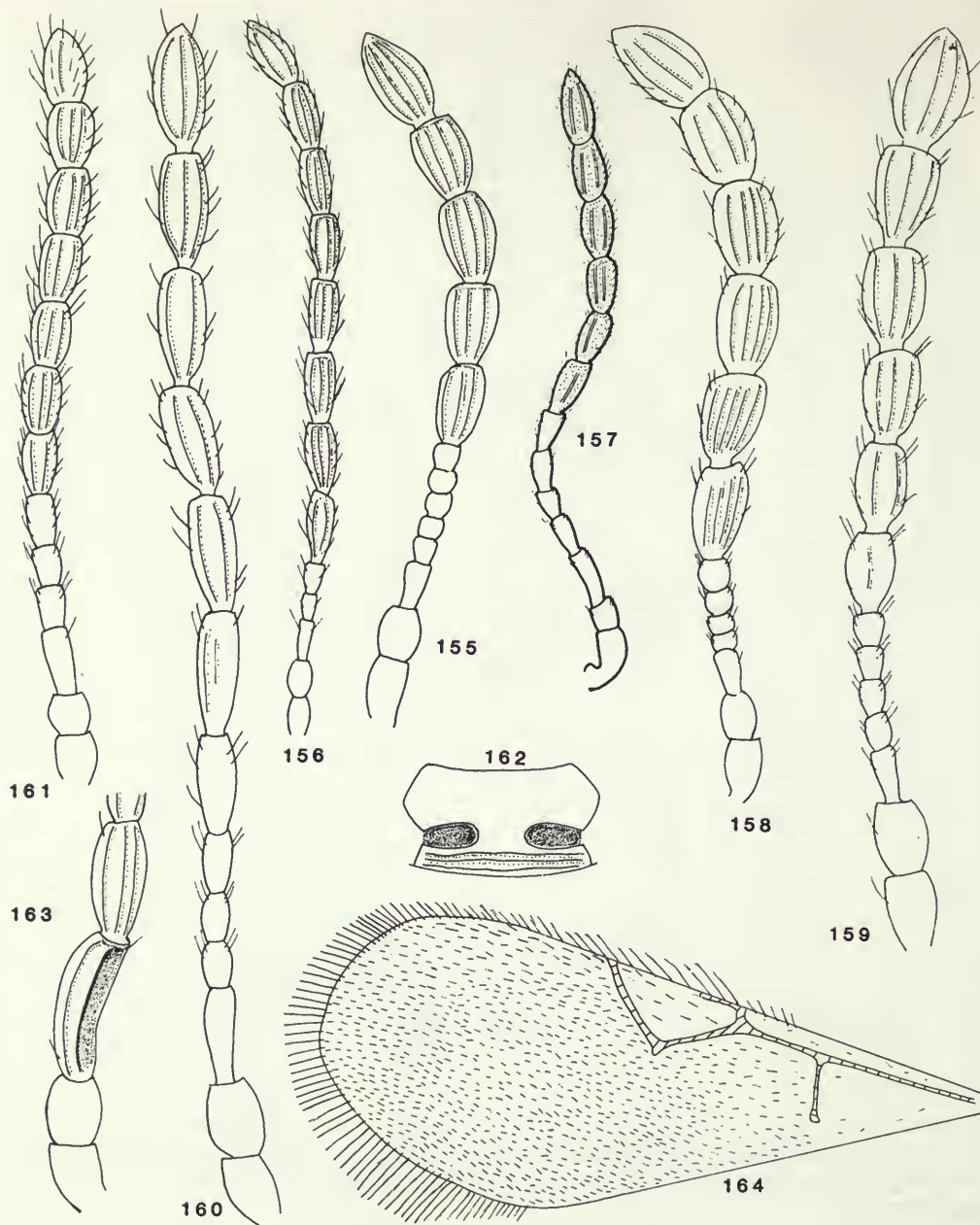
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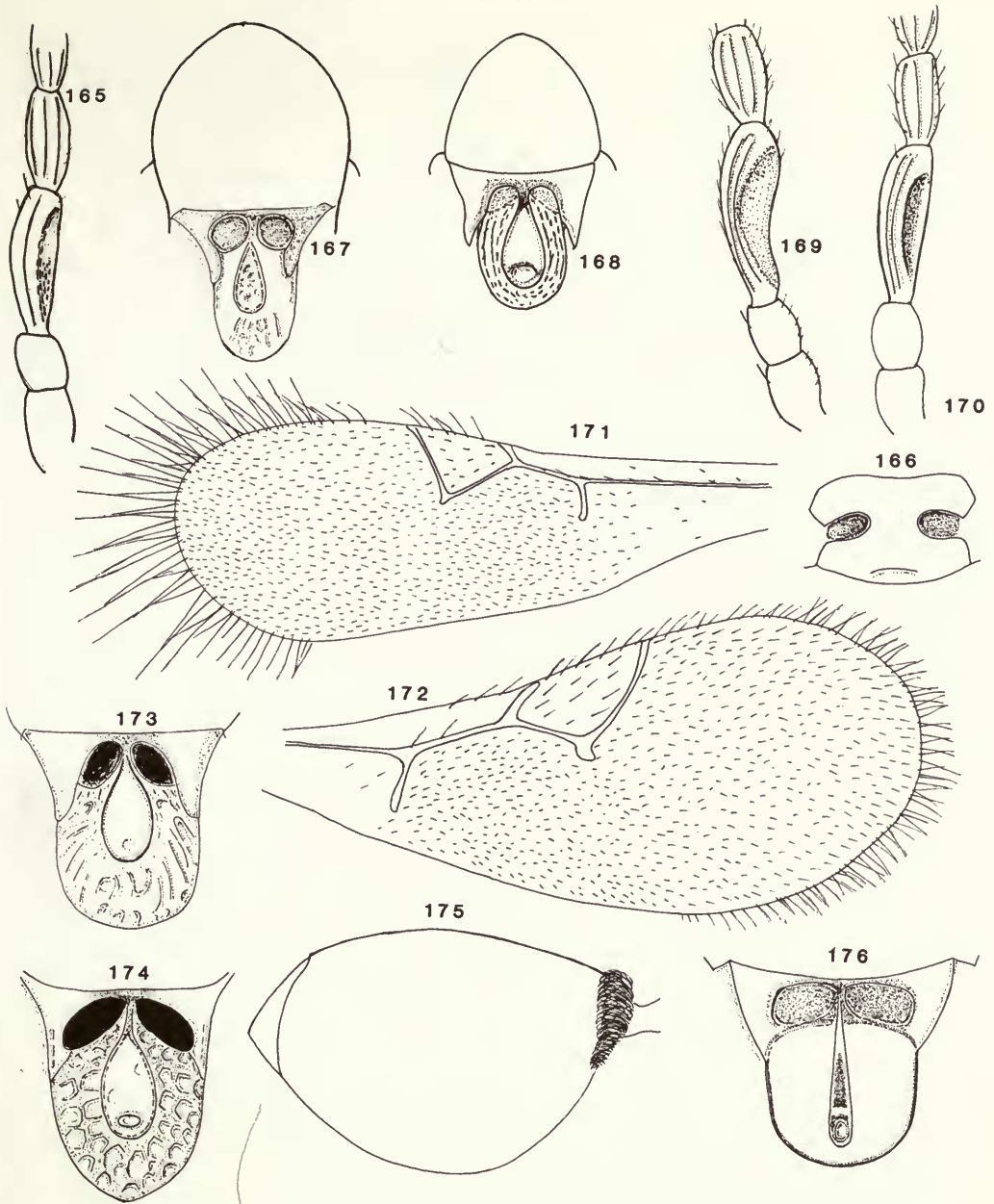
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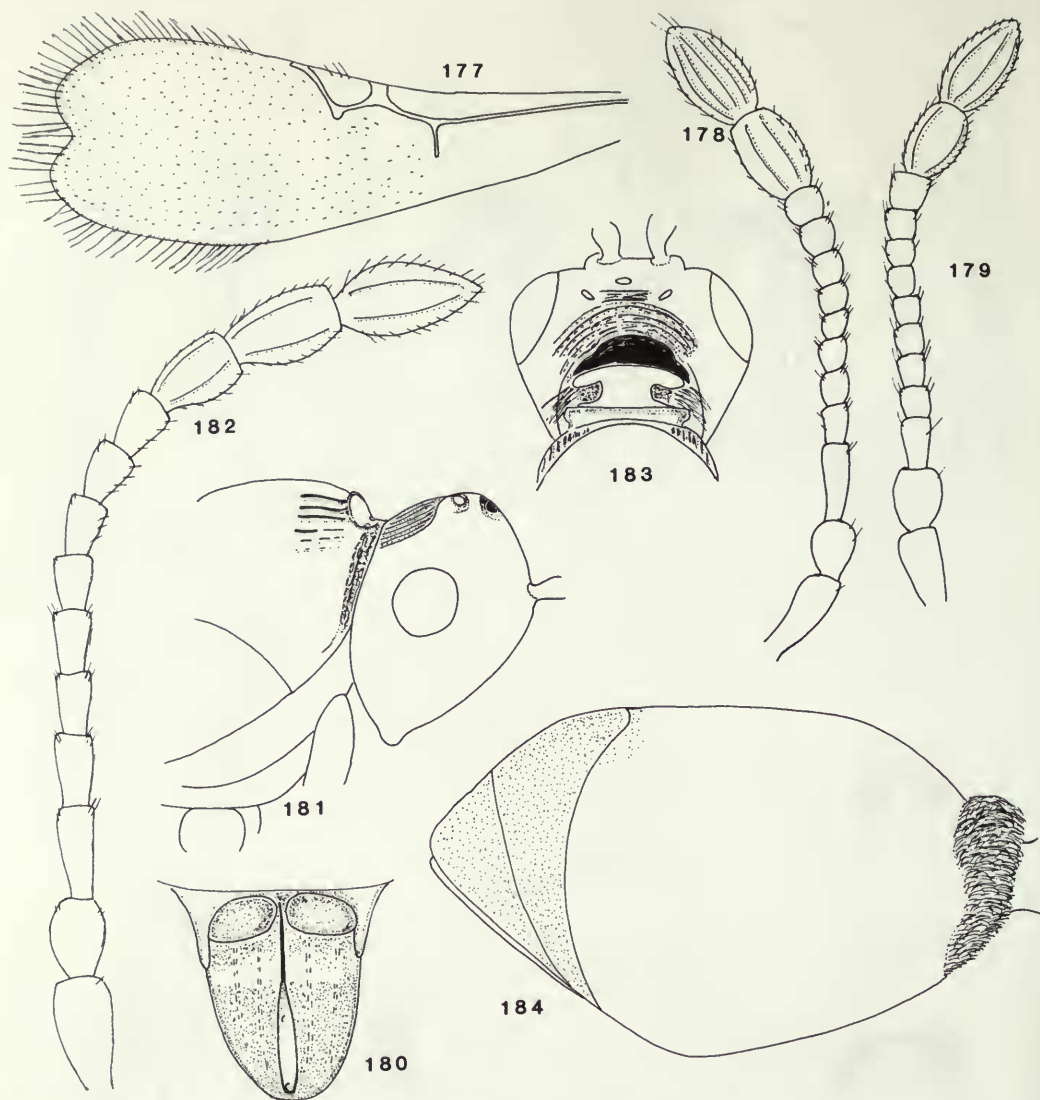
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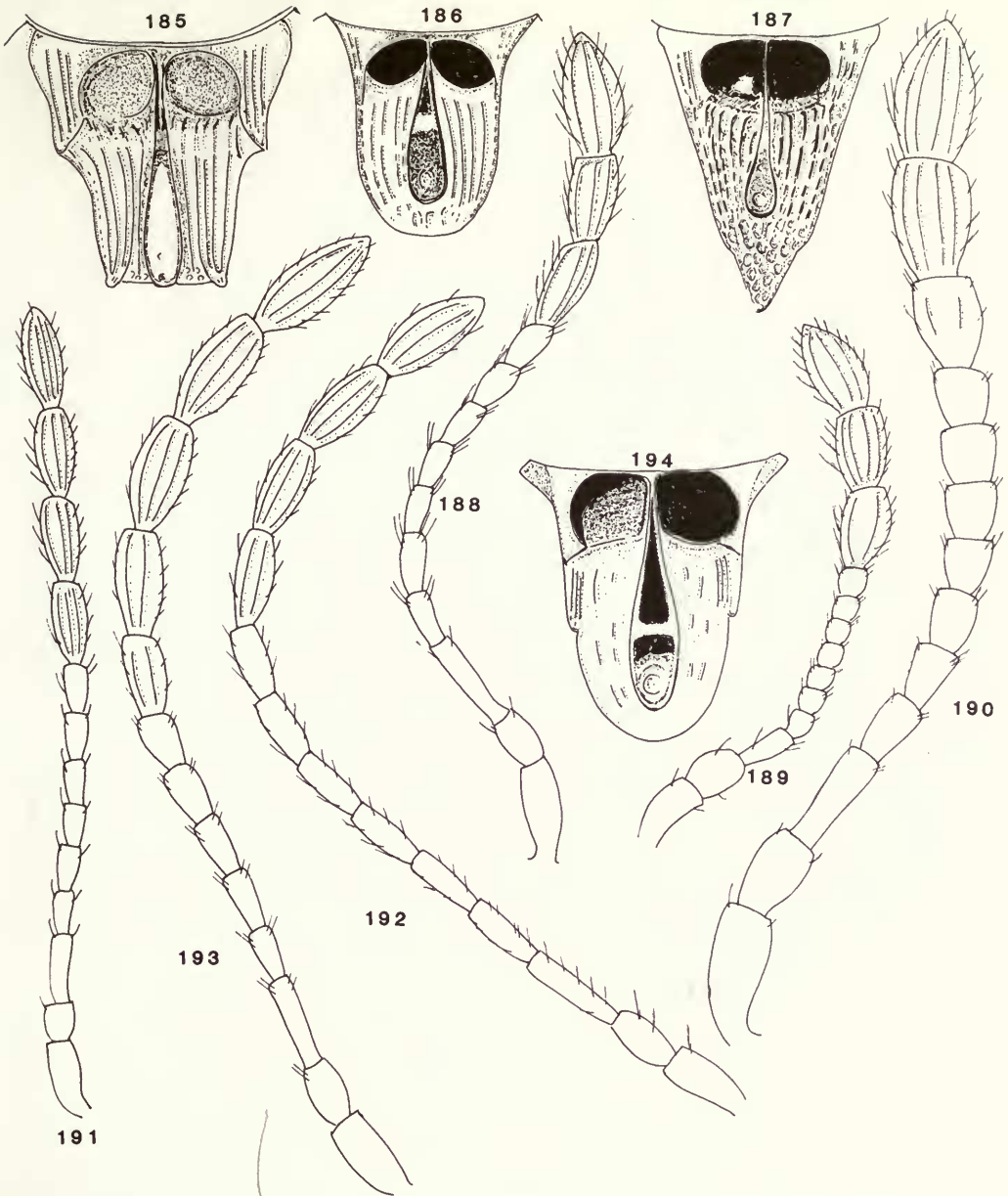
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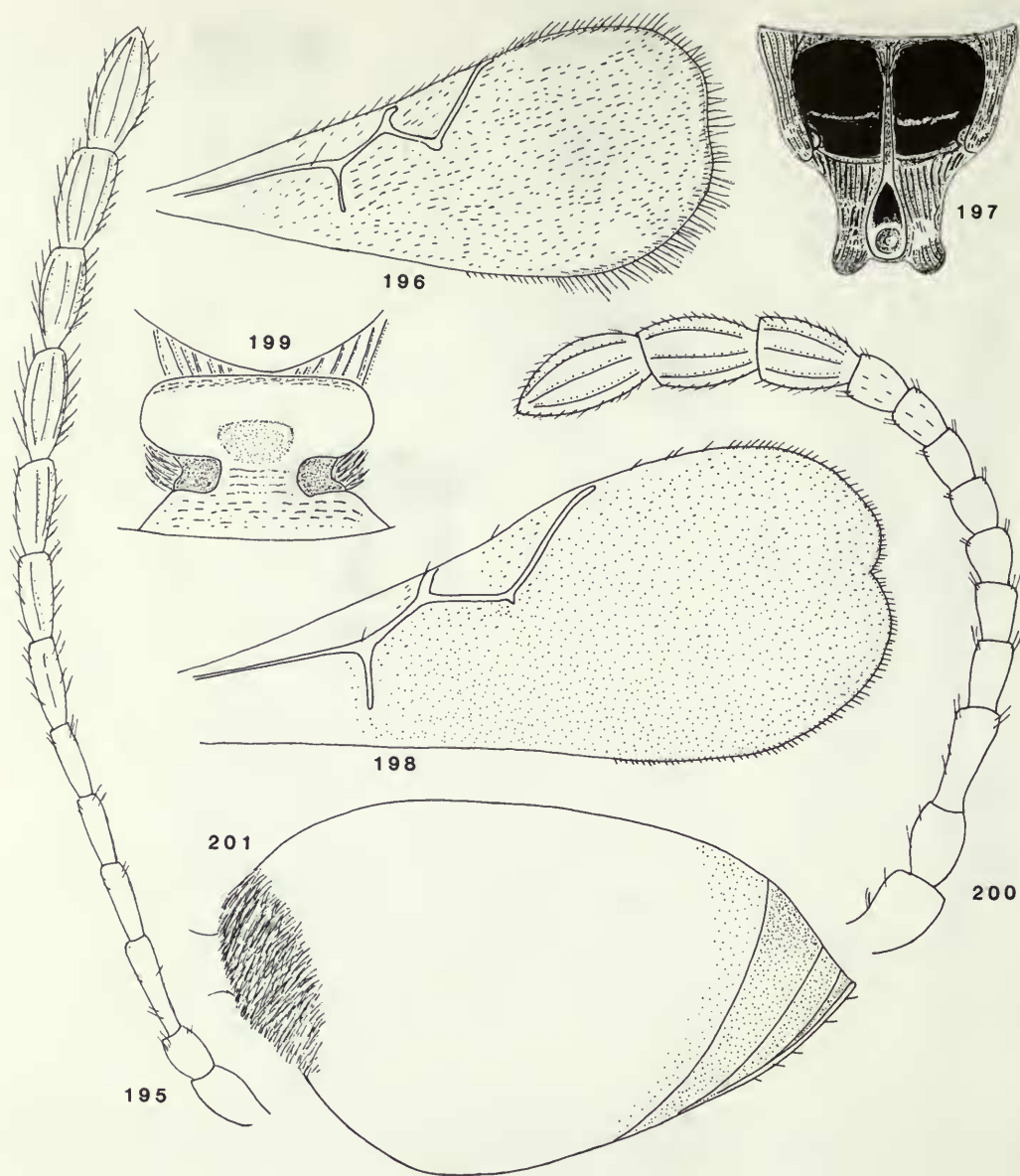
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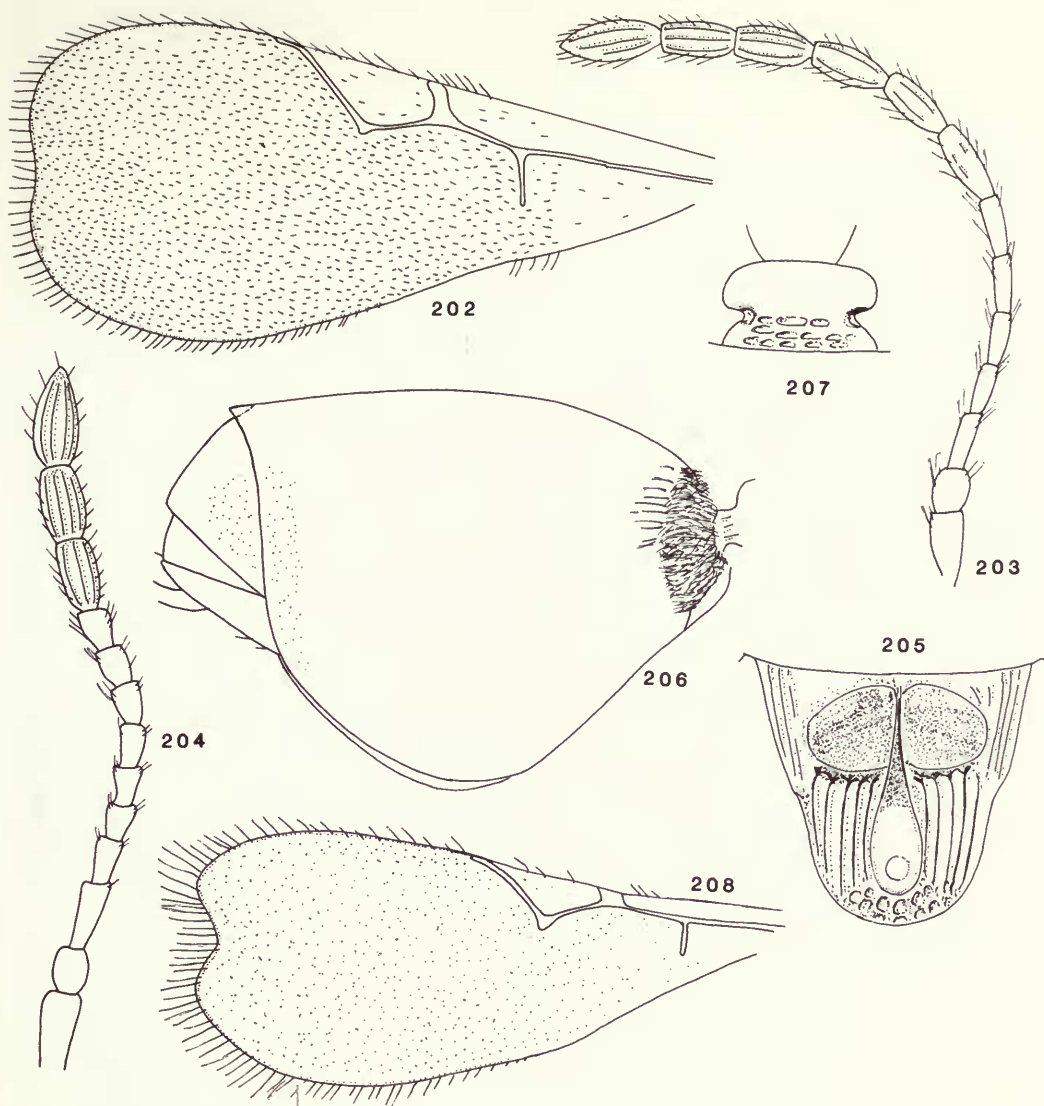
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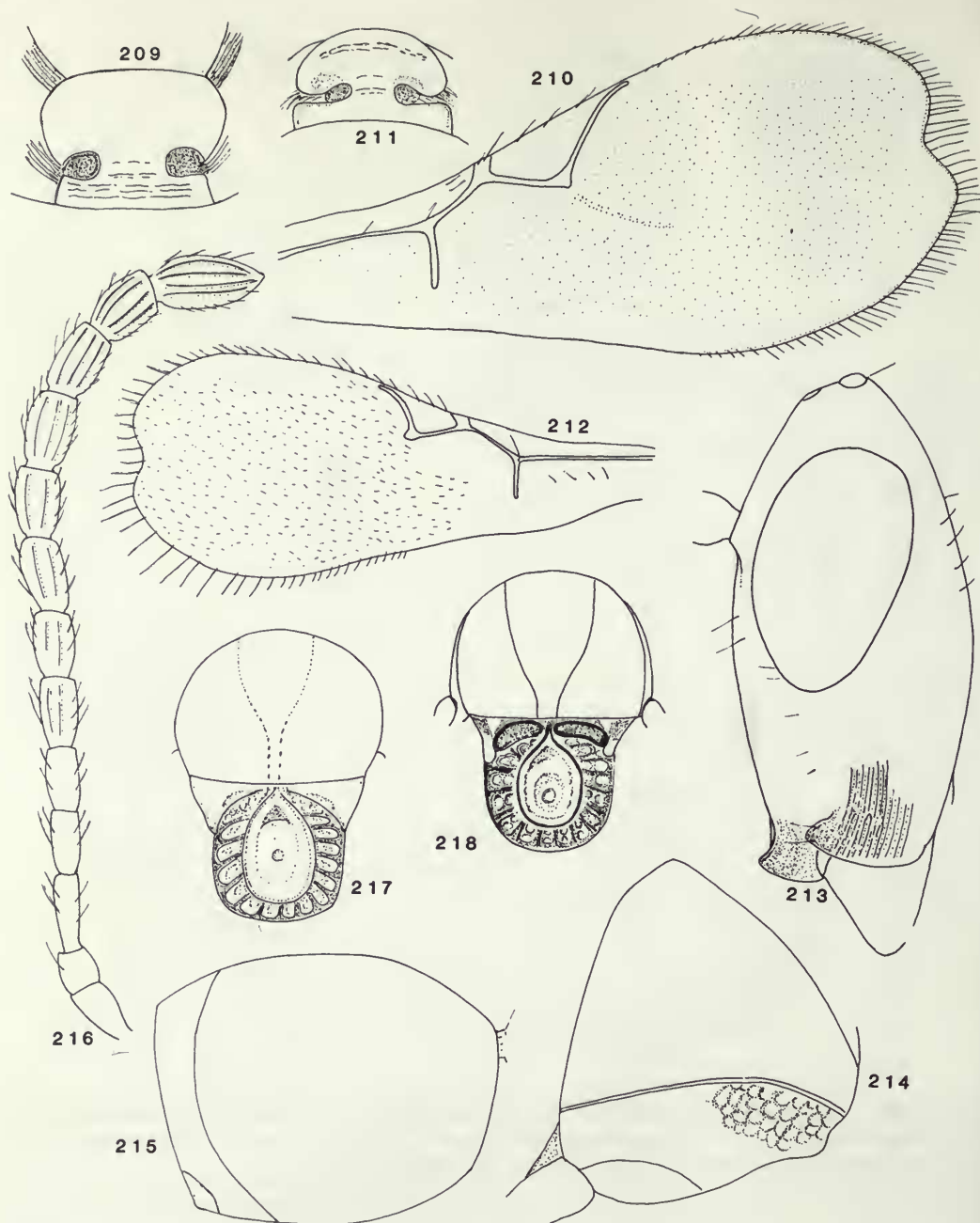
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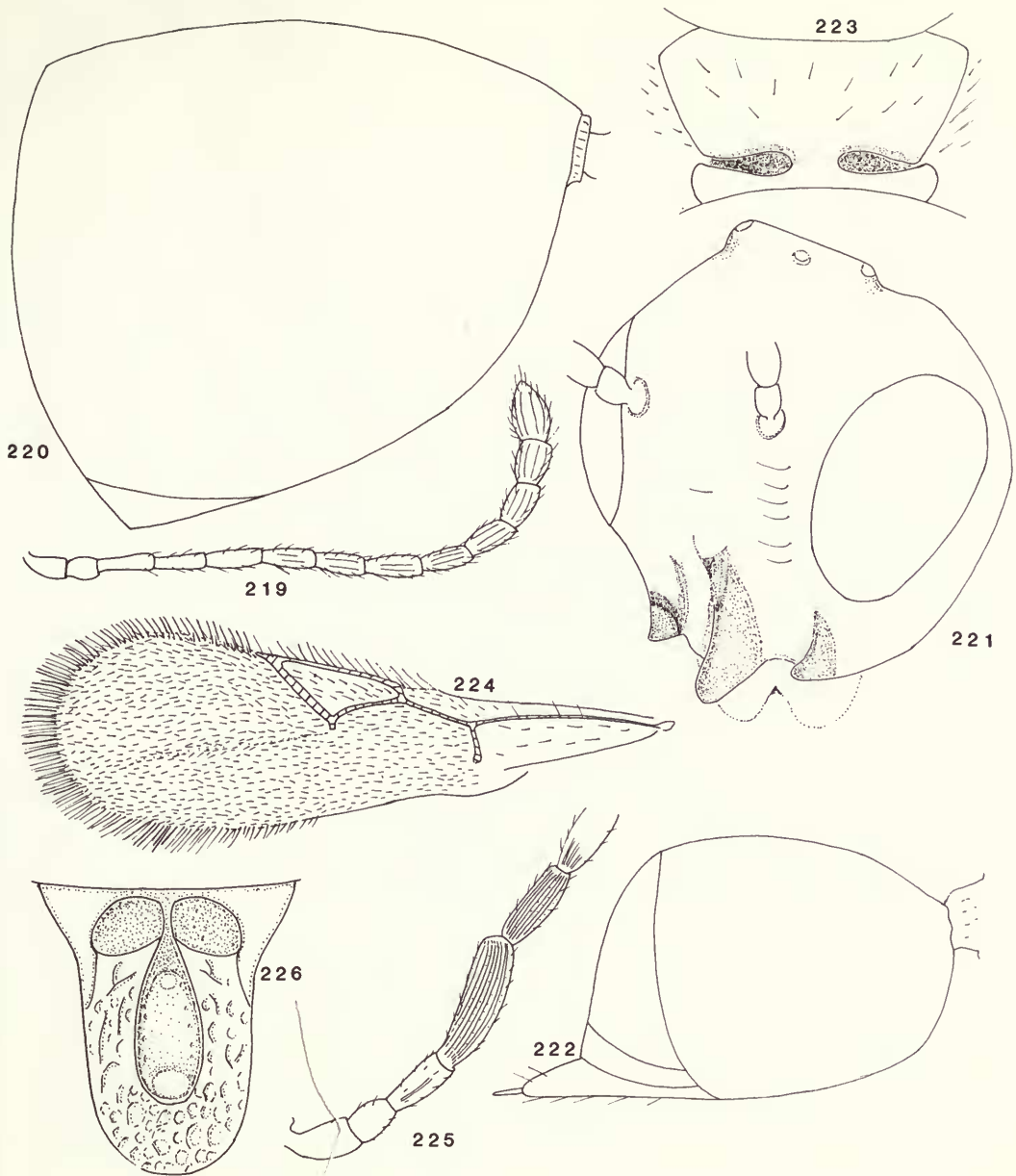
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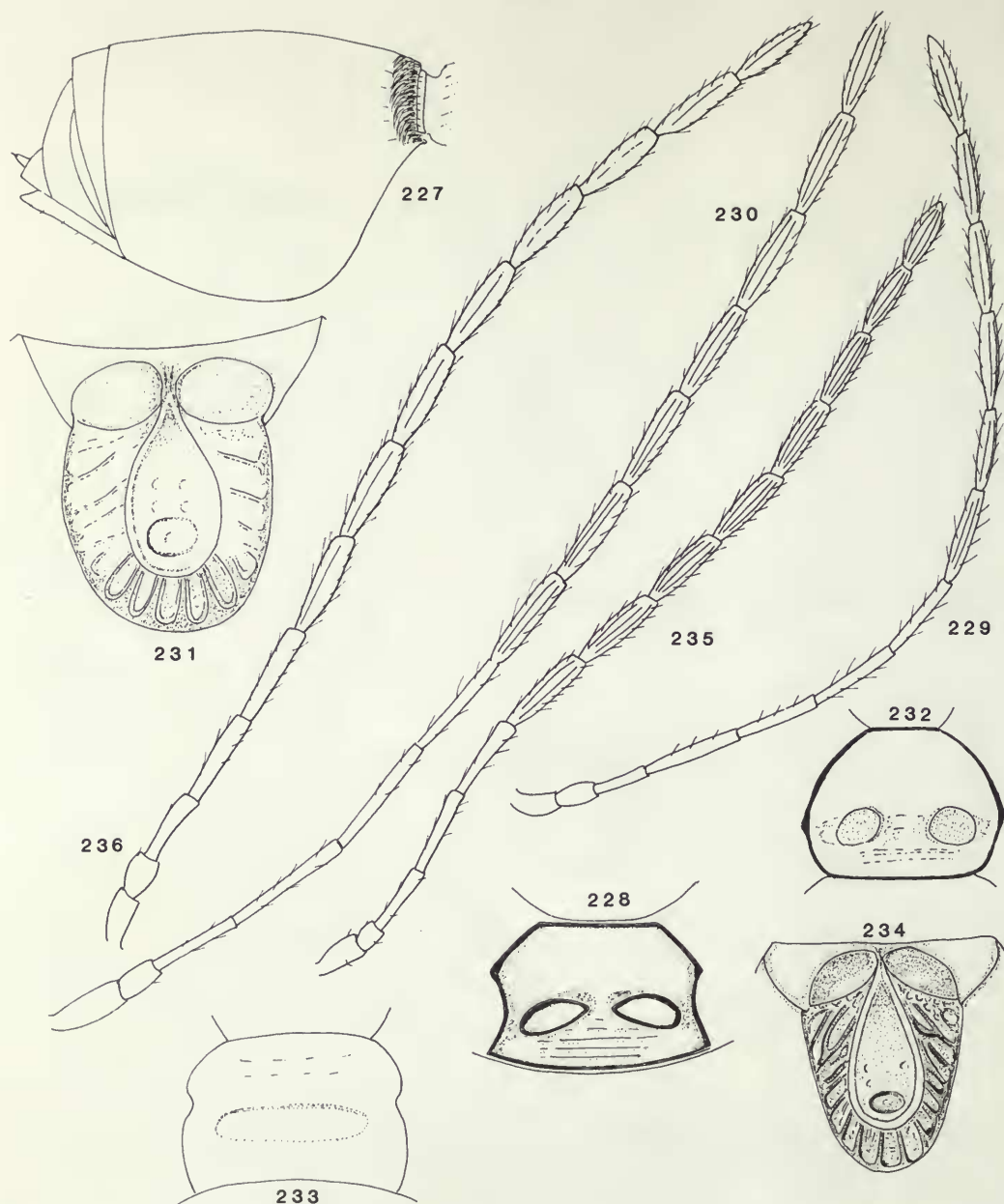
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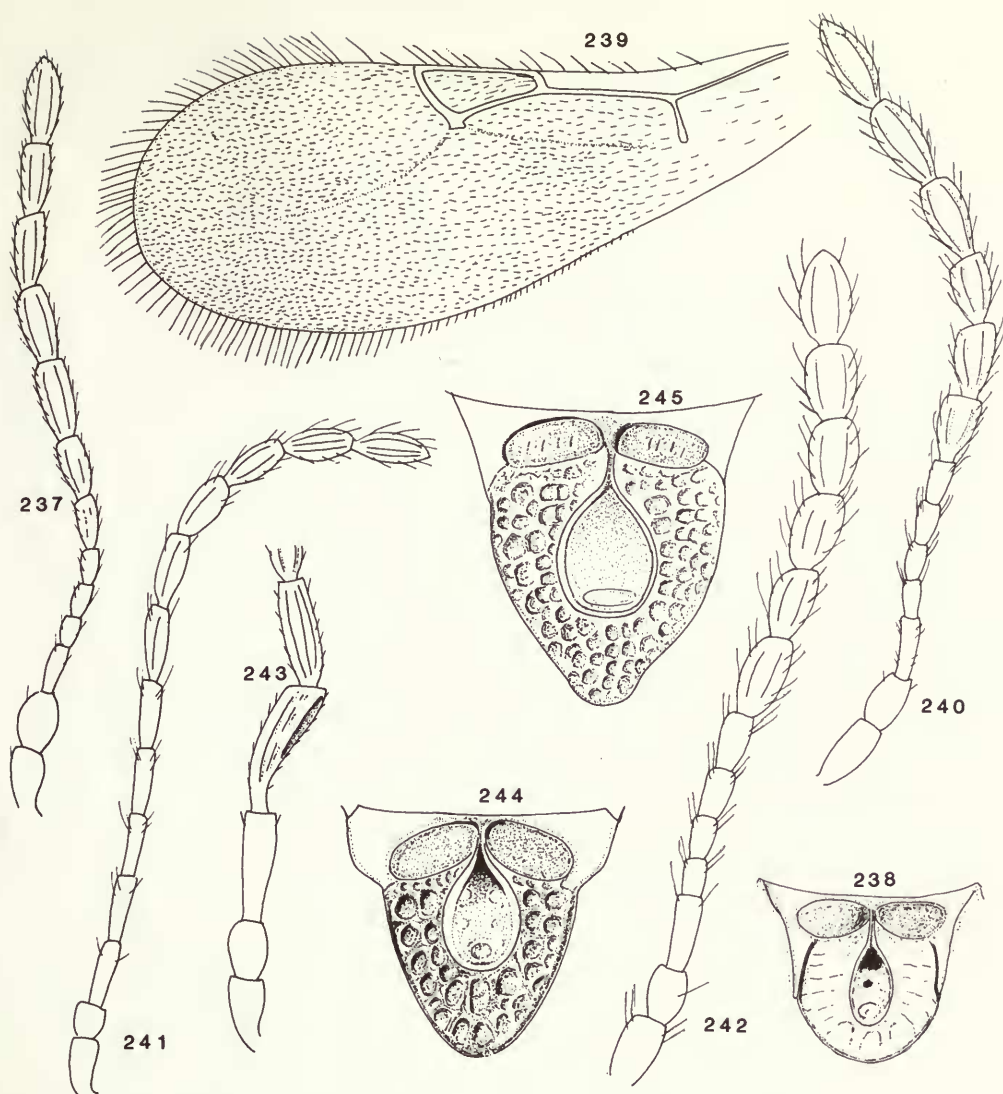
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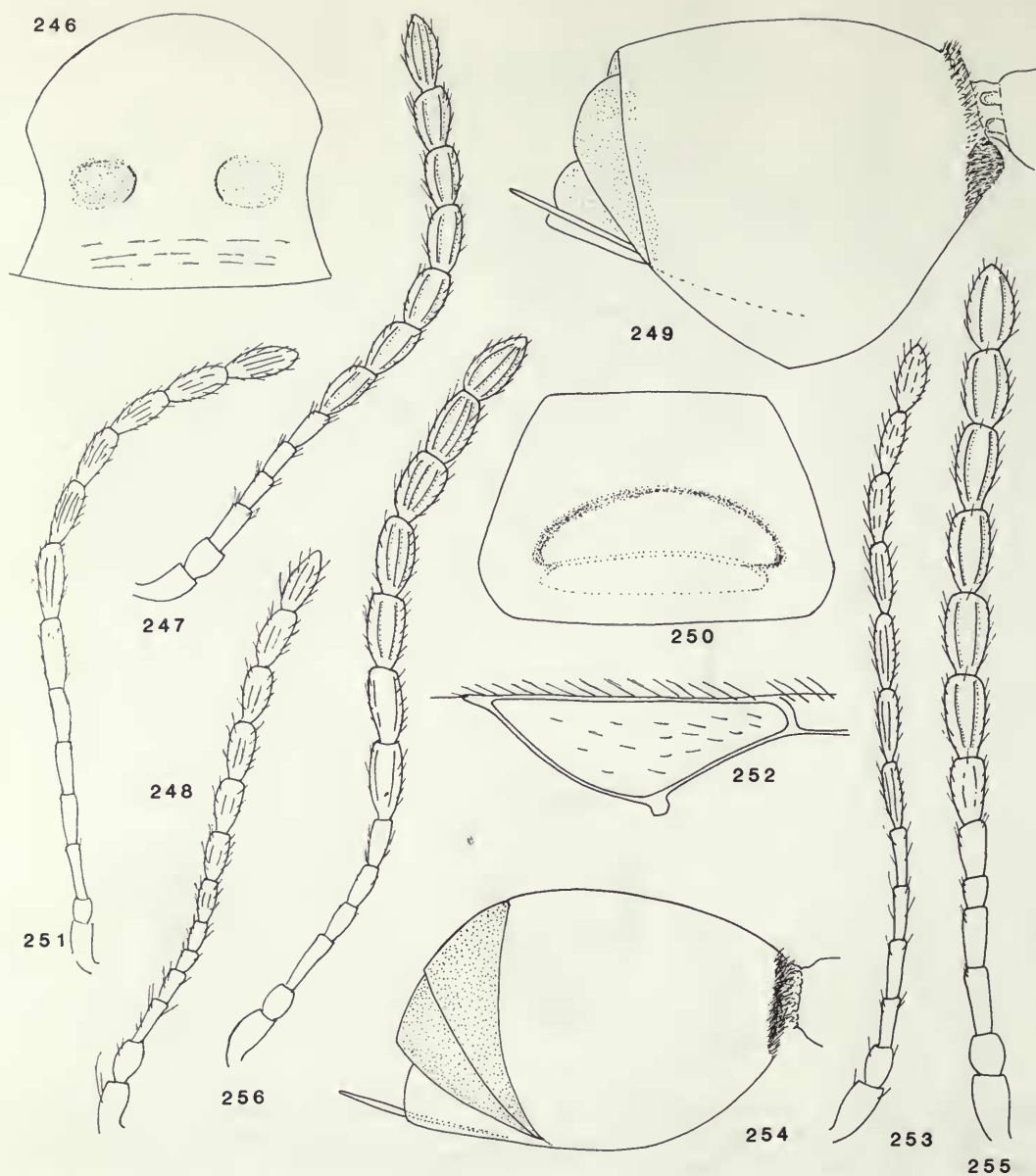
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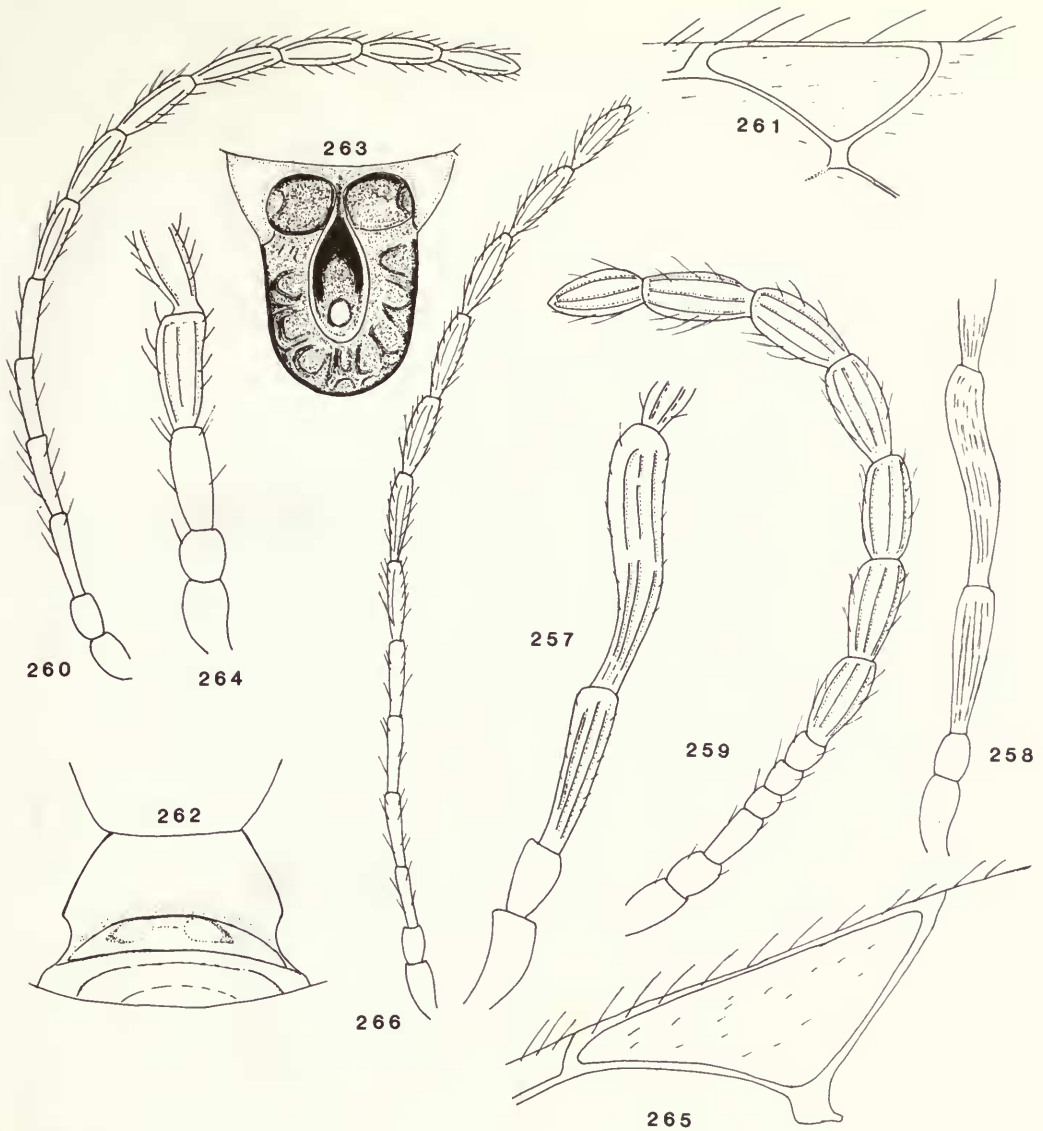
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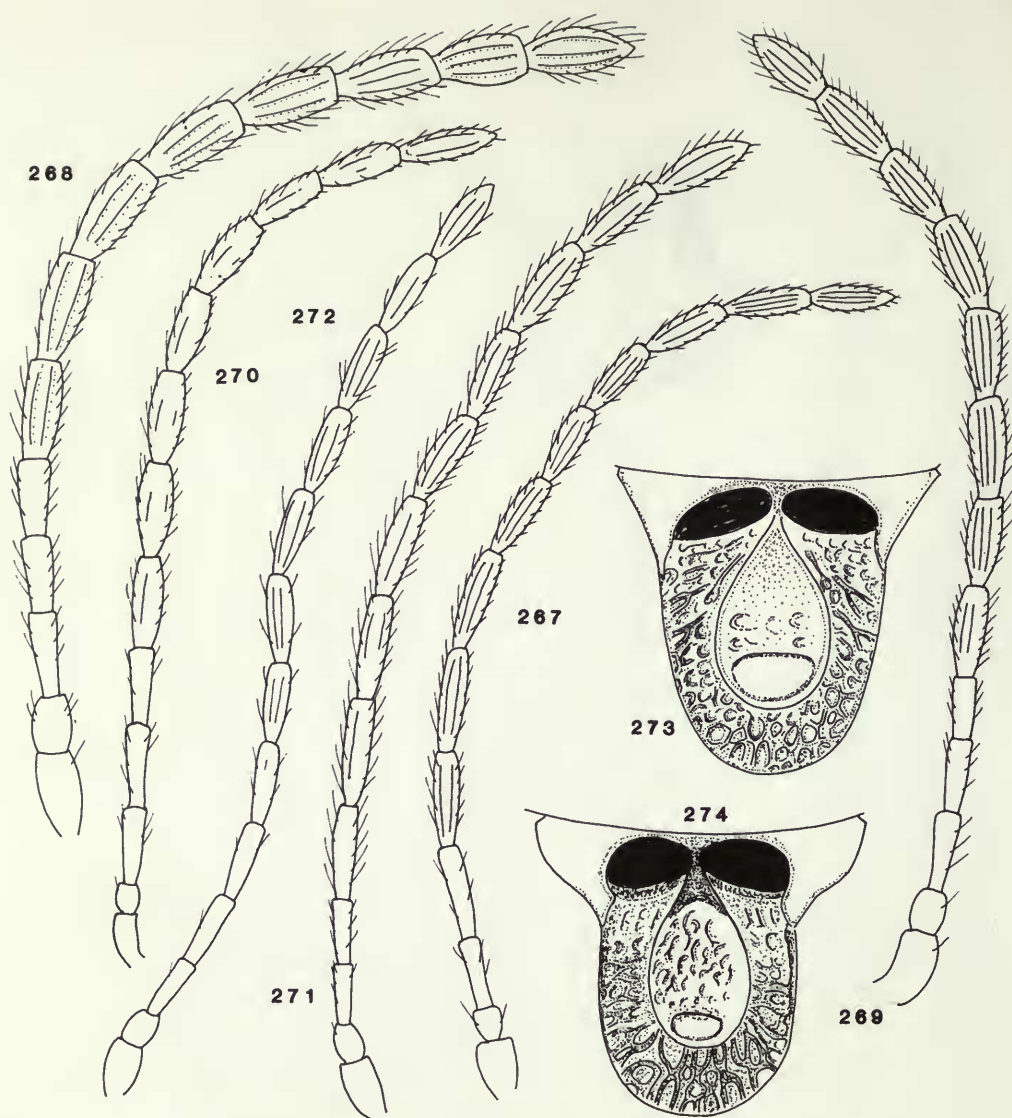
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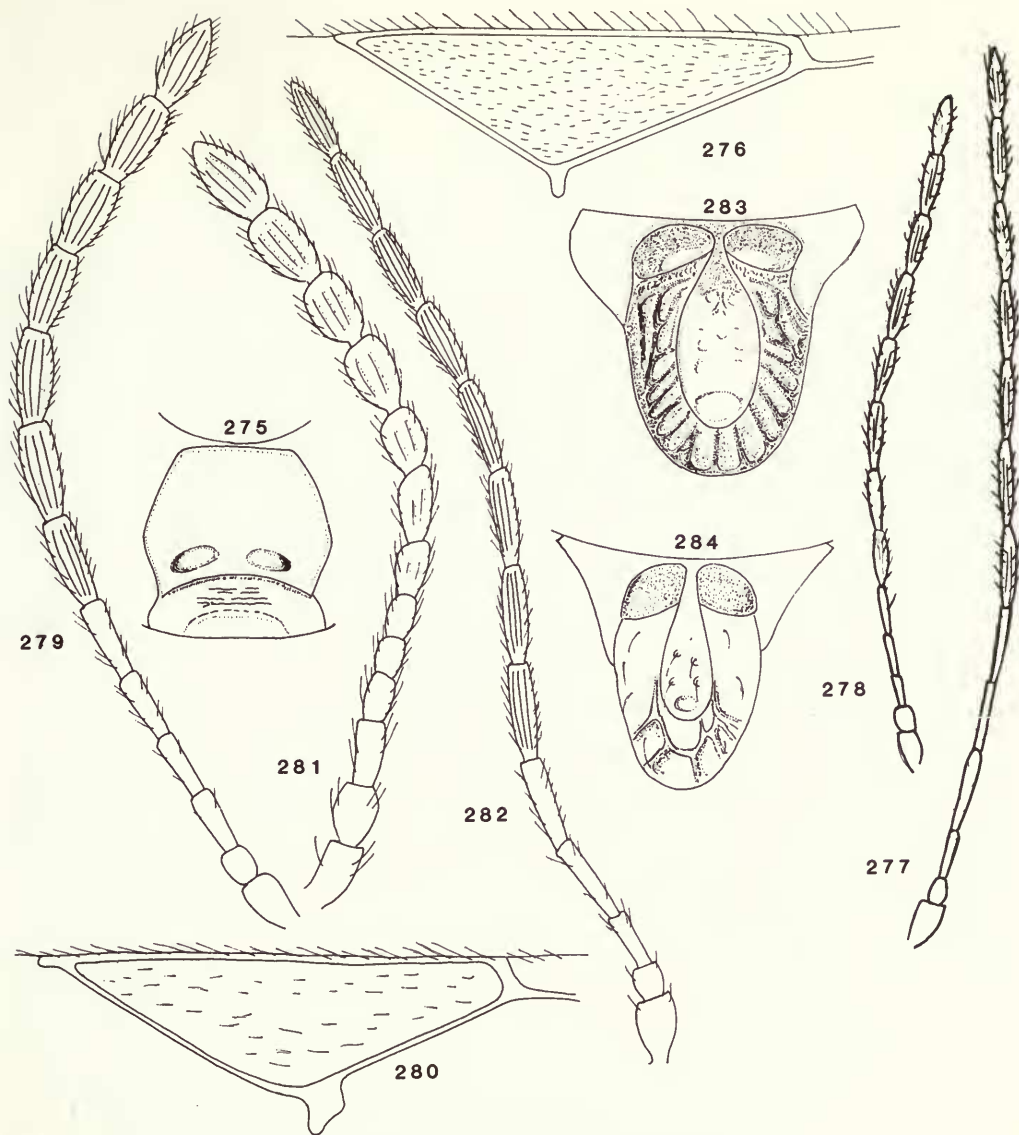
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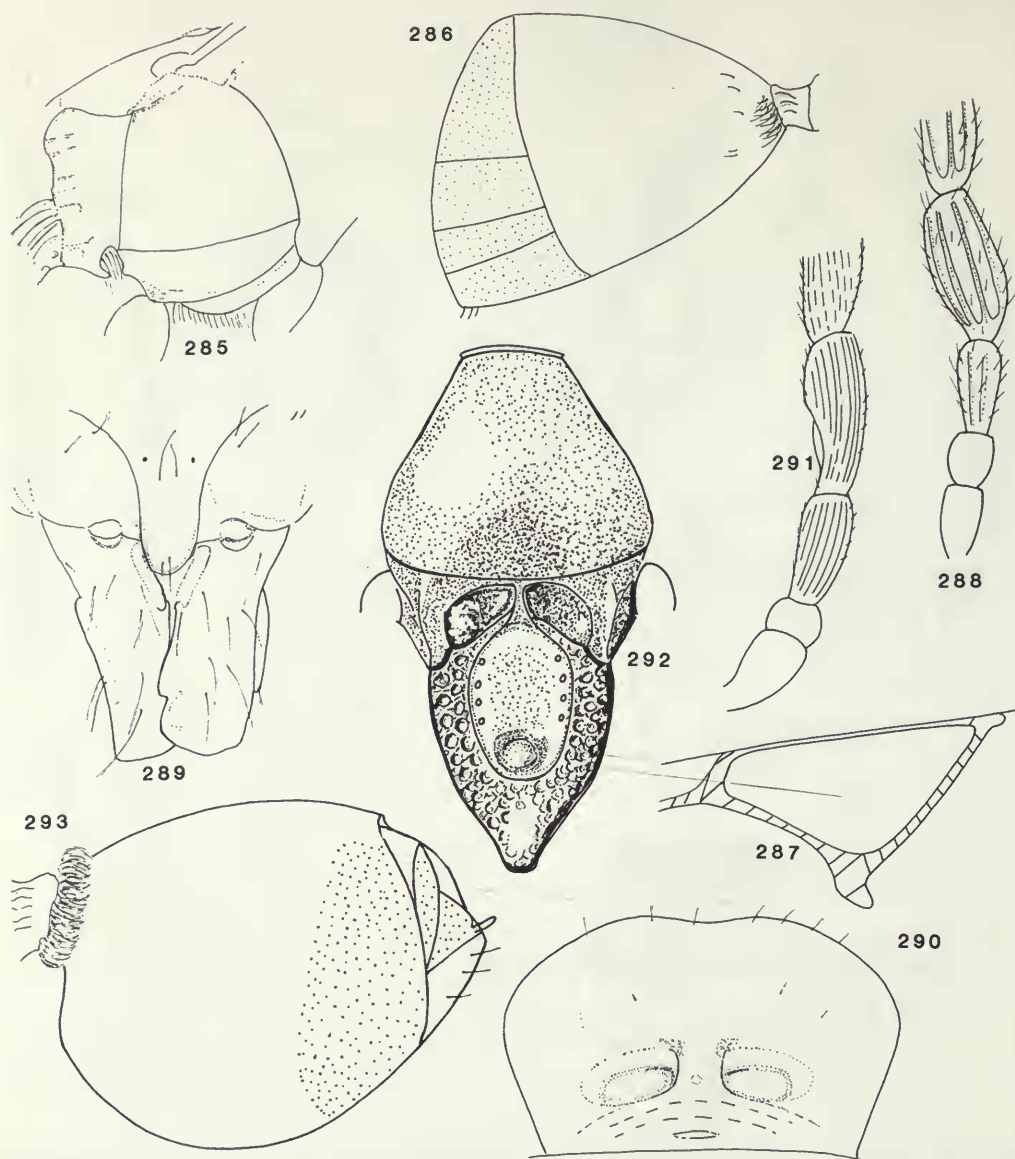
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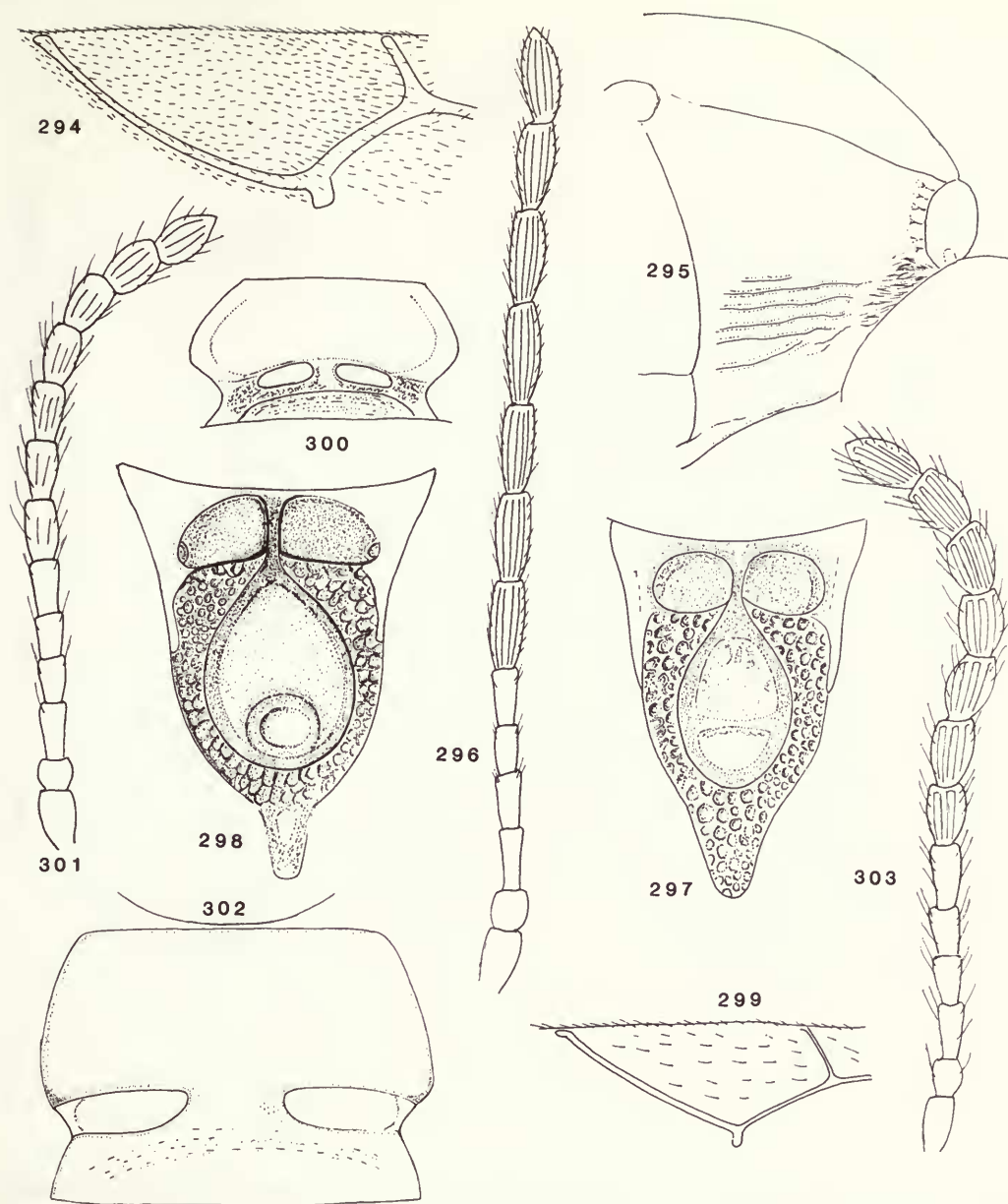
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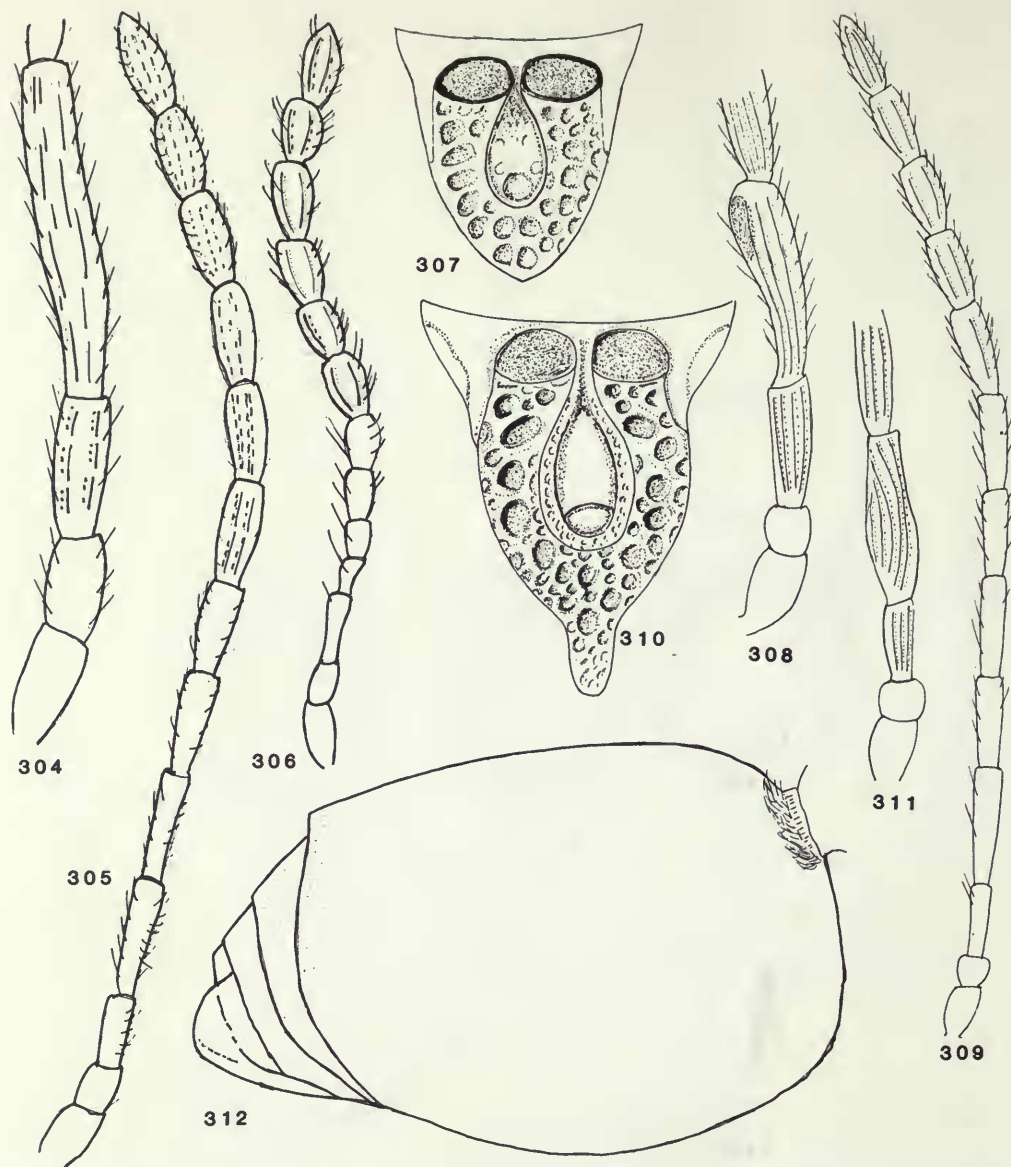
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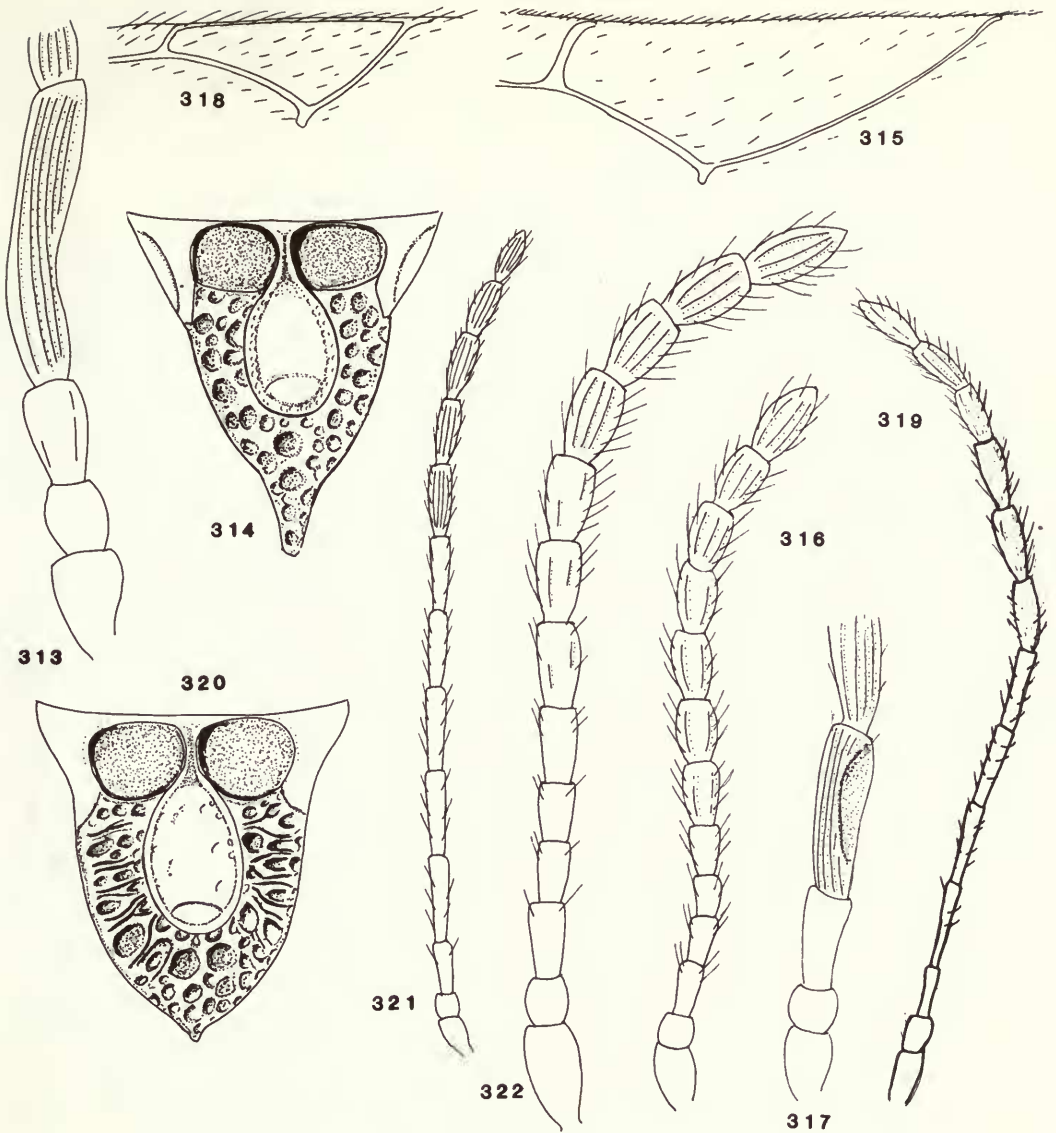
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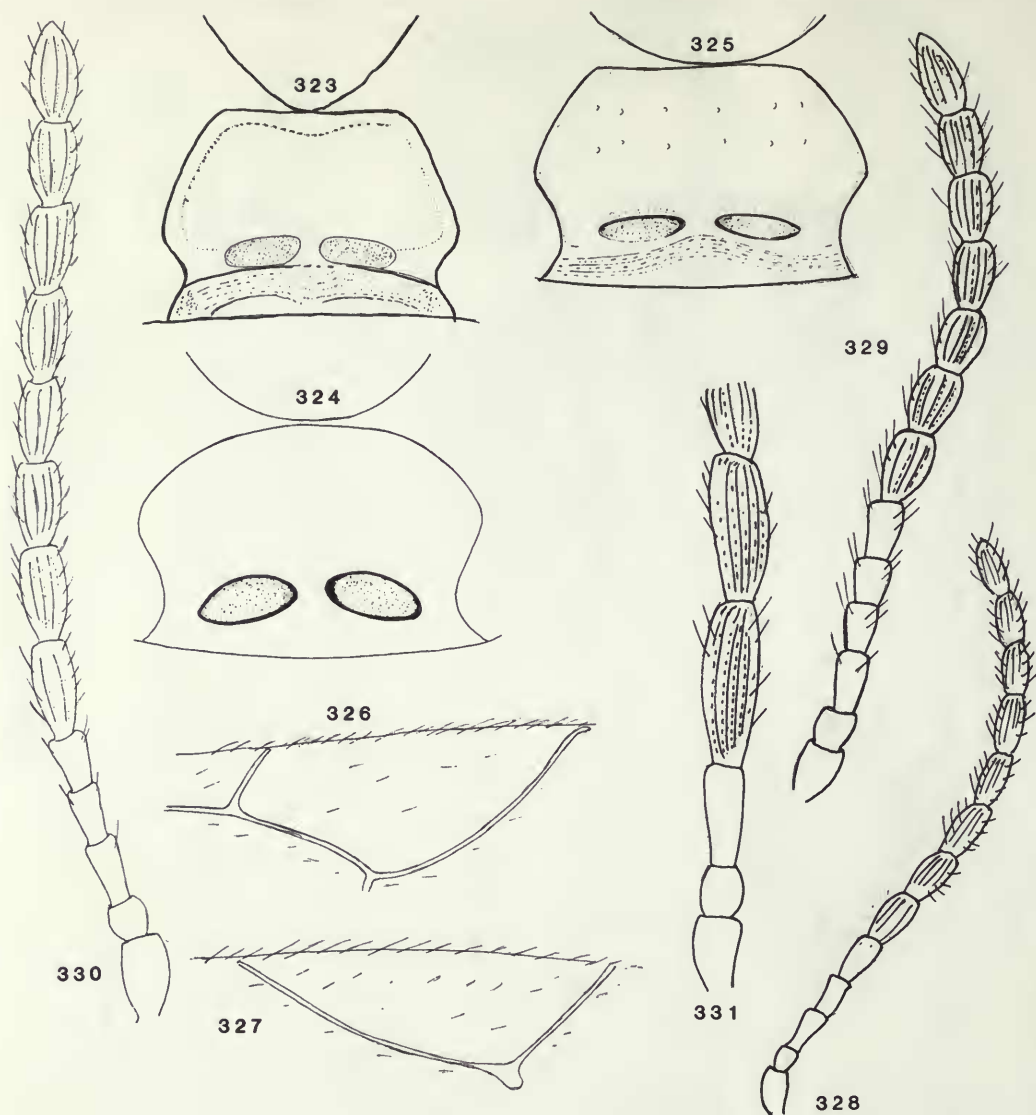
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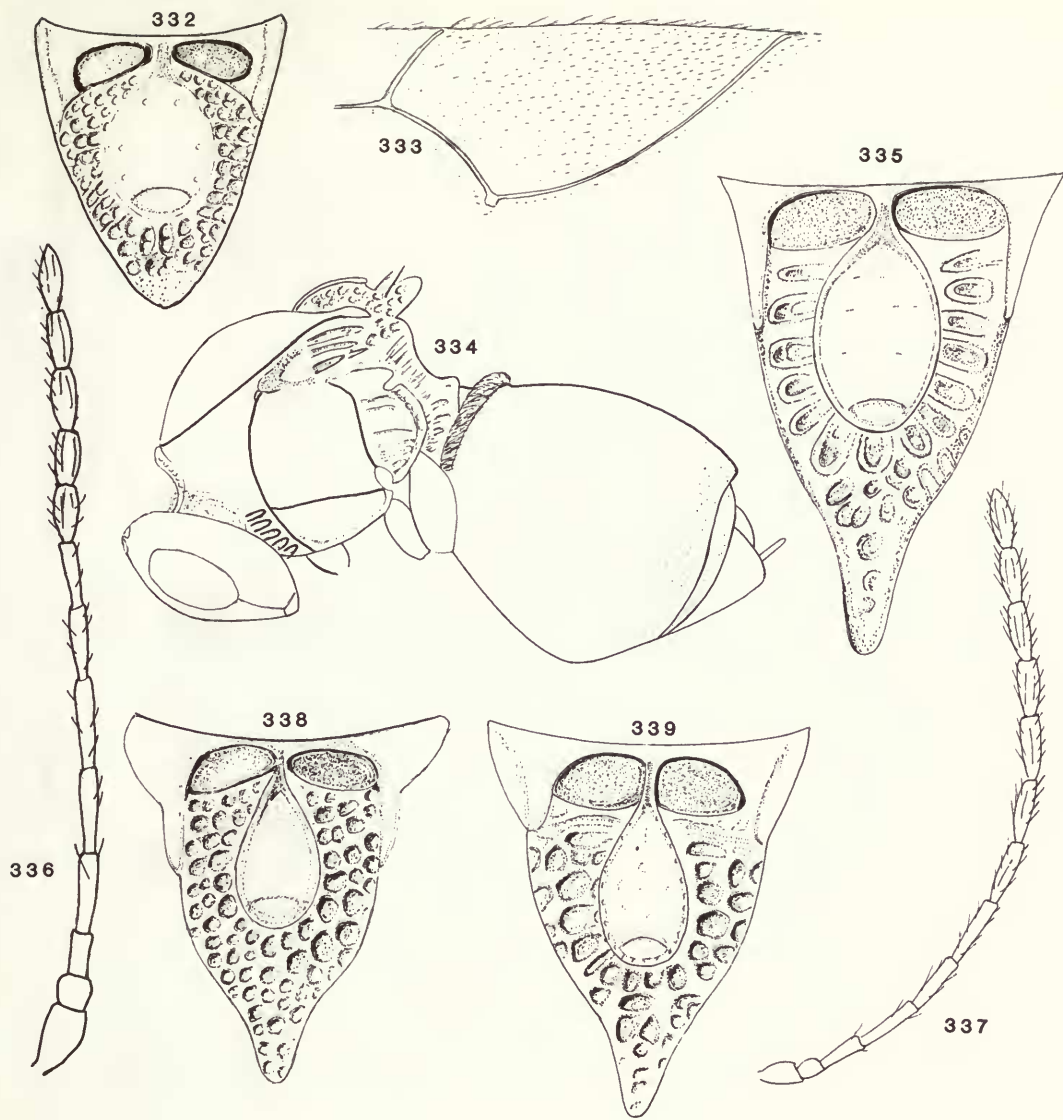
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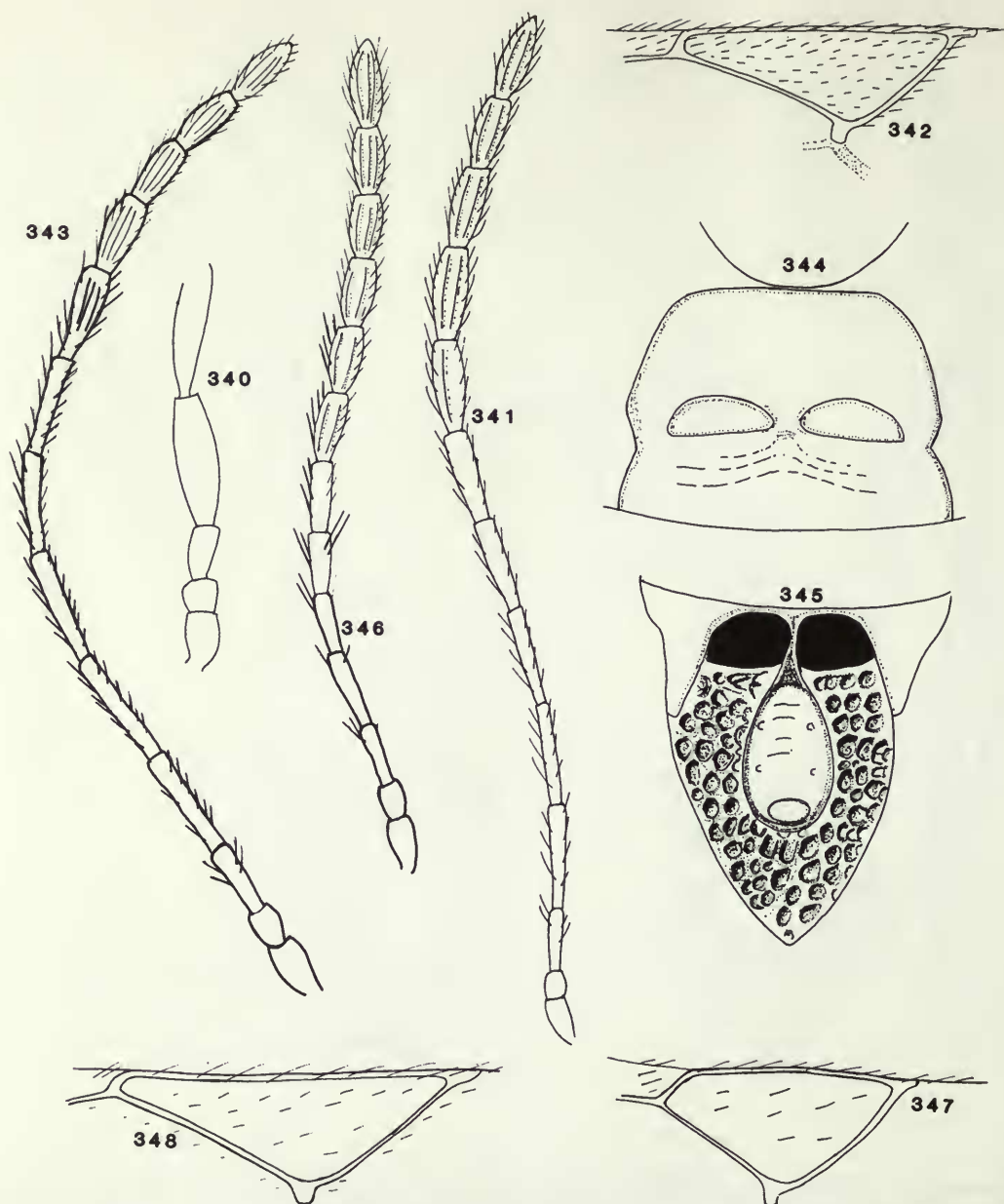
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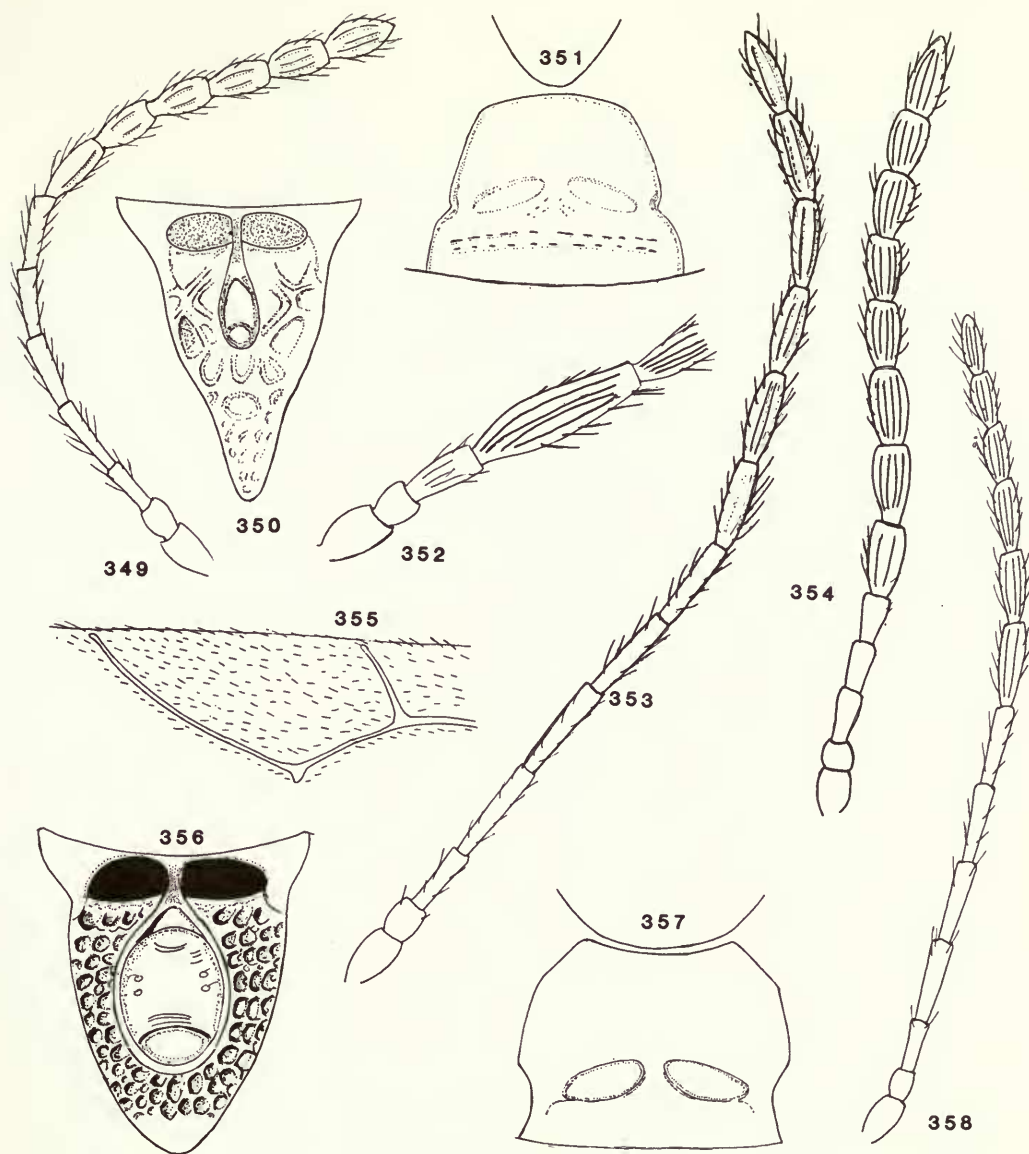
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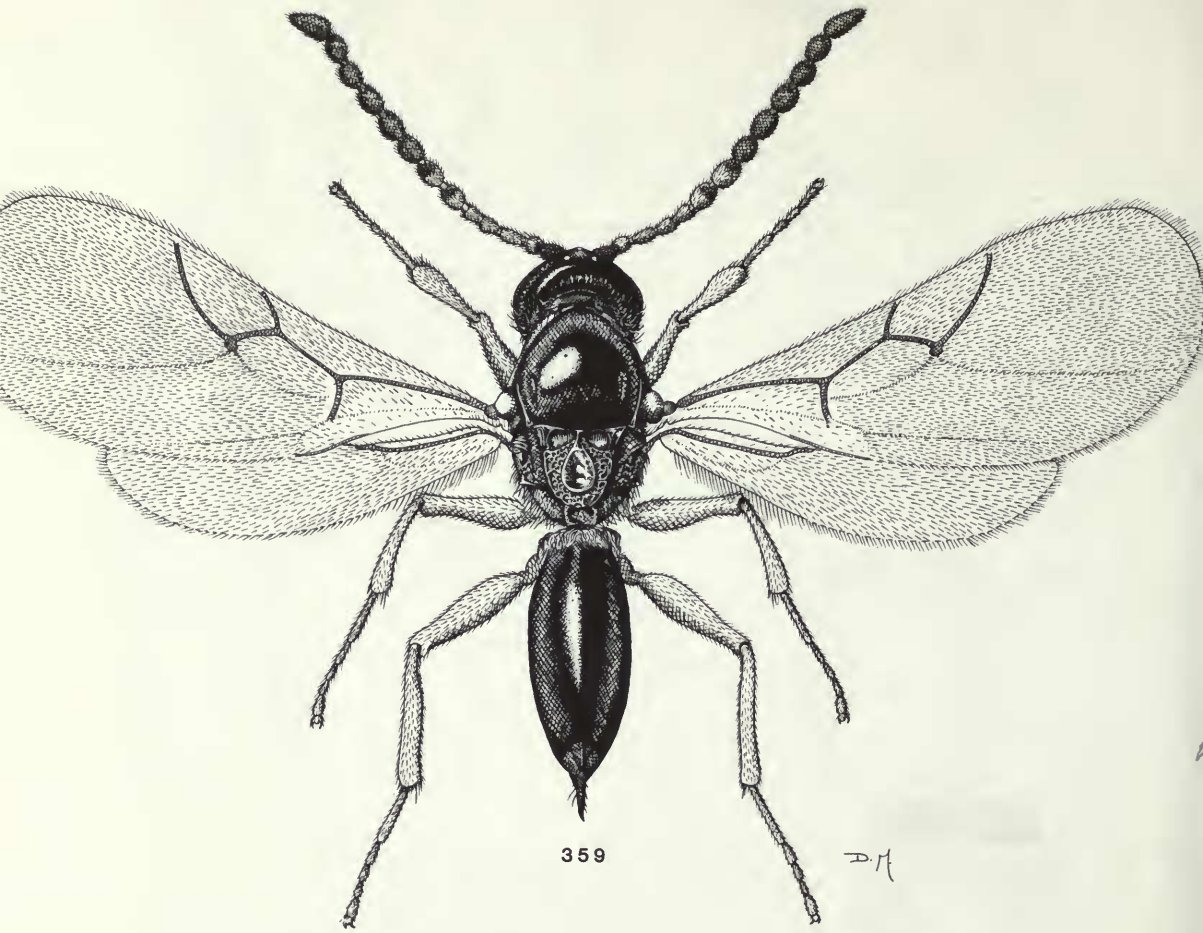
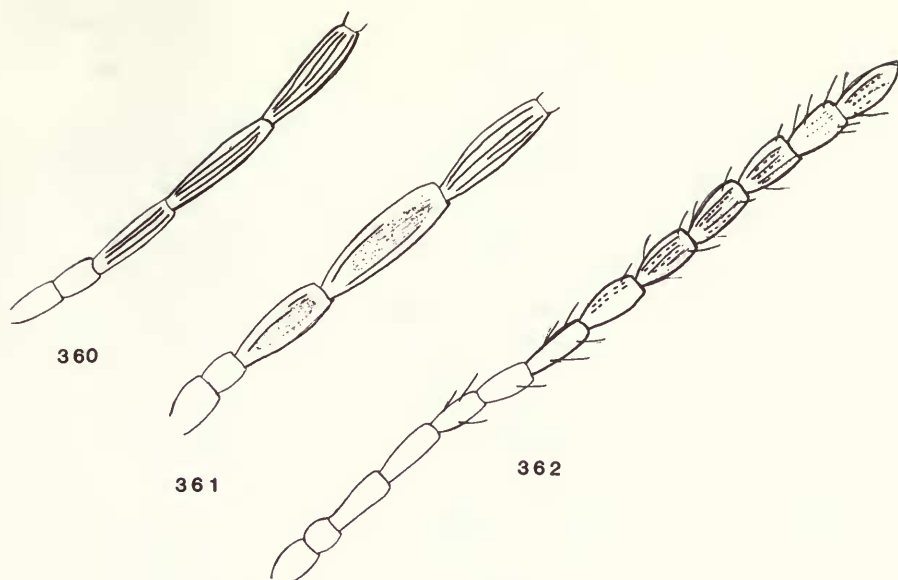


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